APPENDIX D

LDEFI Drawing Package

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

INCHES

"X"	"Y"
0.00	10.76
3.59	10.75
7.18	10.68
10.77	10.58
14.36	10.44
17.94	10.26
21.53	10.04
25.12	9.79
28.71	9.51
32.30	9.19
35.89	8.84
39.48	8.47
43.07	8.07
46.65	7.66
50.24	7.22
53.83	6.77
57.42	6.32
61.01	5.85
64.60	5.38
68.19	4.91
71.78	4.45
75.37	3.99
78.95	3.54
82.54	3.11
86.13	2.69
89.72	2.29
93.31	1.92
96.90	1.57
100.49	1.26
116.00	1.26

NOTES: 1 X AND Y DIMENSIONS ARE NOT ADJUSTED FOR ELONGATION OR CREEP.

C-51510

FEB 16 1984

		UNLESS OTHERWISE SPECIFIED	DRAWN	RUETER	11-11-82
		DIMENSIONS ARE IN INCHES	CHECKED		
		TWO PLACE DECIMALS ± .03	PROJ. ENG.		11-13-82
		THREE PLACE DECIMALS ± .010	MFG.		
		FRACTIONS ±	Q. C.		
		ANGLES ± 0°–30′			
		BREAK EDGES .005–.015			
		MATERIAL			
			RELEASE FOR PRODUCTION		
NEXT ASSY	USED ON		NO.	APPROVED	DATE
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.		

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

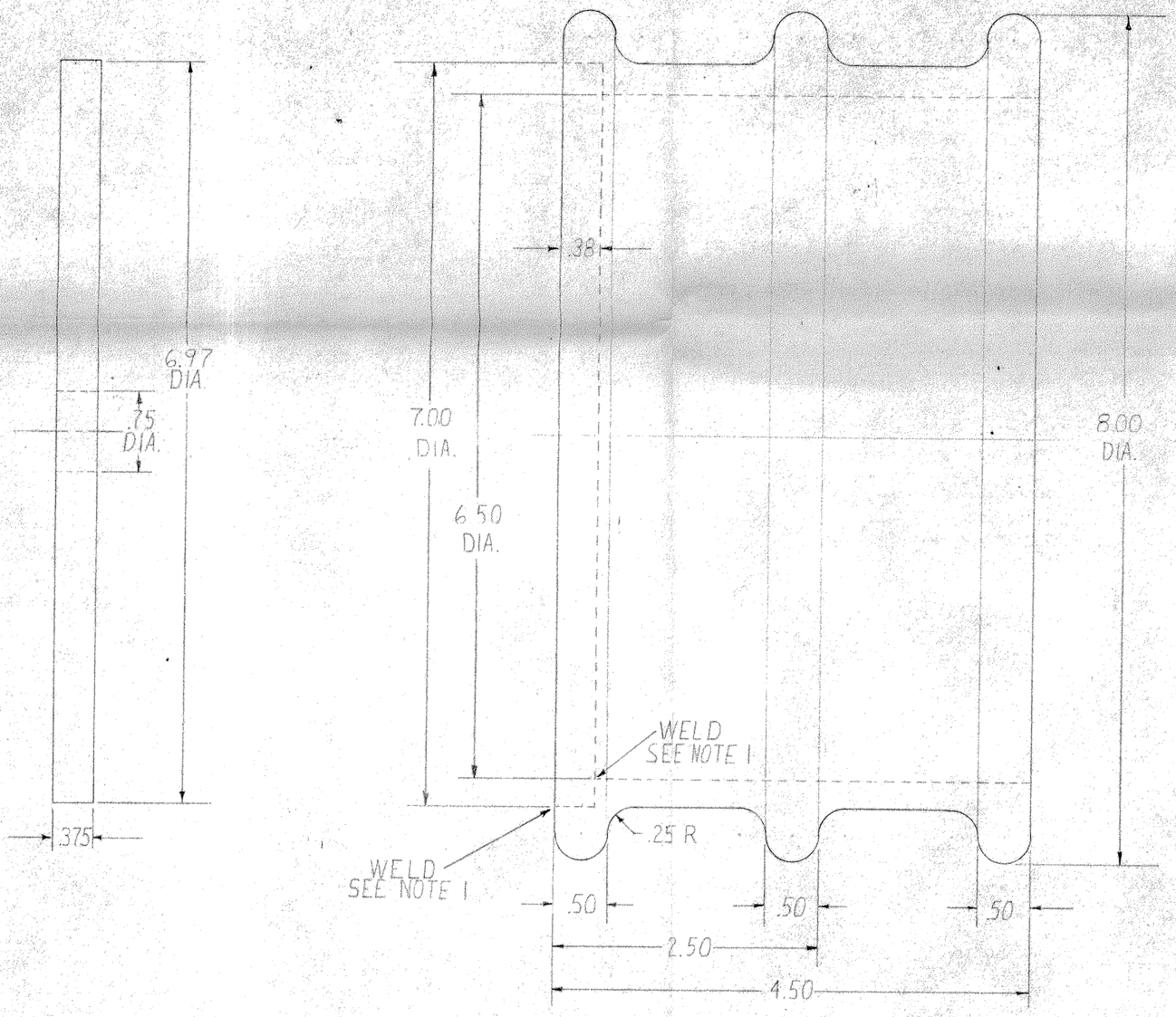
TITLE
LDEFI GORE PATTERN

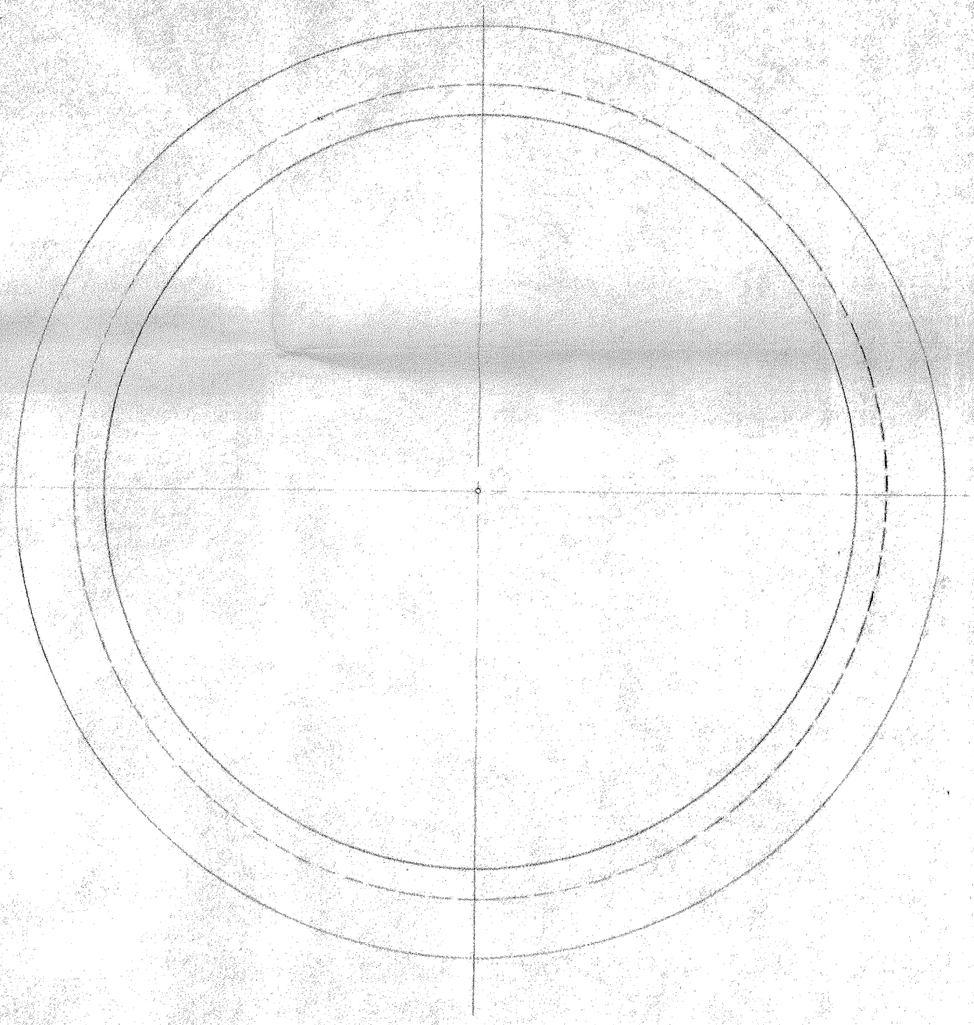
CODE IDENT NO.	SIZE	DRAWING NO.
14979	C	C-51510

SCALE NONE	WT.	SHEET

STANDARD BLUE, OMAHA 68127

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED





NOTES:

1. AL. DISK WELDED IN PLACE AROUND PERIMETER AND INSIDE UNION AS SHOWN.

FEB 16 1984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015

MATERIAL 6061-T6 ALUMINUM

DO NOT SCALE DRAWING

DRAWN	M. WEST	5-27-83
CHECKED		
PROJ. ENG.	M. WEST	5-27-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION		
NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE
SPOOL, INVERTED END

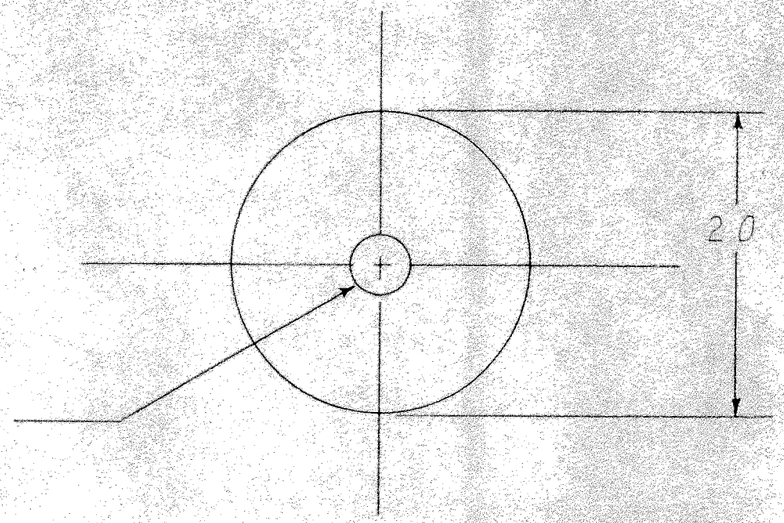
CODE IDENT NO.	SIZE	DRAWING NO.
14979	C	51621

SCALE	WT.	SHEET

STANDARDBLUE, OMAHA 26627

4 3 2 1

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



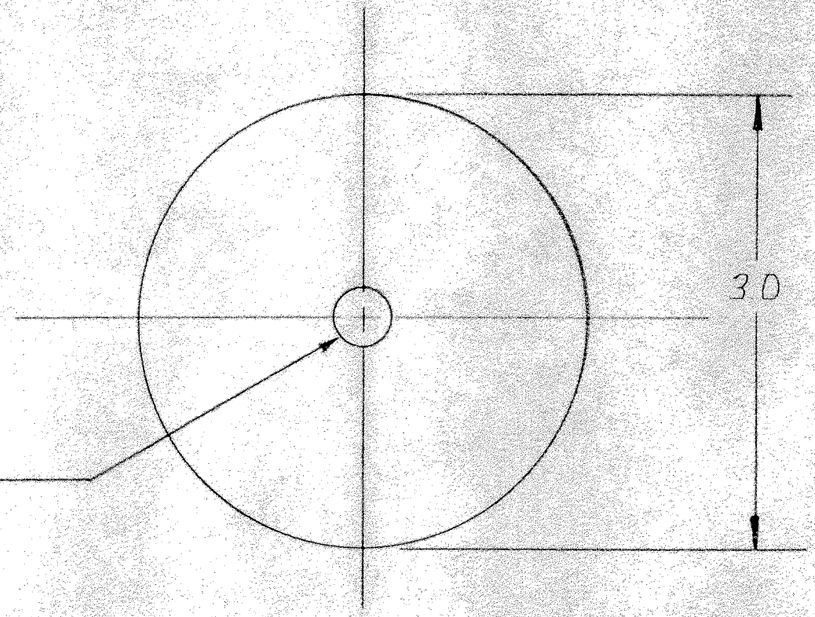
HOLE .406 DIA

EEB 16 1984

		UNLESS OTHERWISE SPECIFIED	DRAWN	M WEST 5-27-83	RAVEN industries, inc. SIOUX FALLS, SOUTH DAKOTA
		DIMENSIONS ARE IN INCHES	CHECKED		
		TWO PLACE DECIMALS ± .03	PROJ. ENG.	M WEST 5-27-83	
		THREE PLACE DECIMALS ± .010	MFG.		TITLE TIRE VALVE GASKET
		FRACTIONS ±	Q. C.		
		ANGLES ± 0°–30′			
		BREAK EDGES .005–.015			
		MATERIAL .062 THK NEOPRENE 40 DUROMETER	RELEASE FOR PRODUCTION		CODE IDENT NO. 14979 / SIZE B / DRAWING NO. 51622
			NO.	APPROVED / DATE	
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.		SCALE / WT. / SHEET

STANDARDBLUE, OMAHA 15429

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

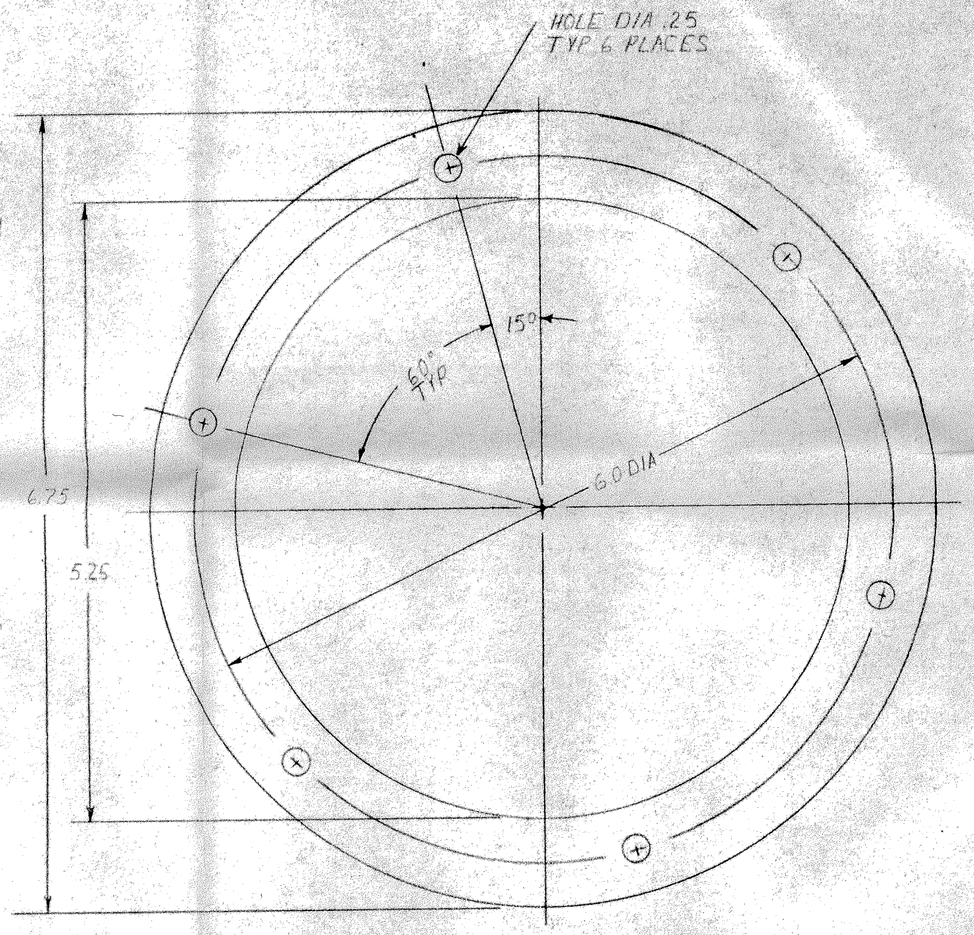


FEB 161984

		UNLESS OTHERWISE SPECIFIED	DRAWN	M WEST	6-27-83	RAVEN industries, inc. SIOUX FALLS, SOUTH DAKOTA		
		DIMENSIONS ARE IN INCHES TWO PLACE DECIMALS ± .03 THREE PLACE DECIMALS ± .010 FRACTIONS ± ANGLES ± 0°–30' BREAK EDGES .005–.015	CHECKED					
			PROJ. ENG.	M WEST	6-27-83			
			MFG.					
			Q. C.					
		MATERIAL				TITLE TIRE VALVE DOUBLER		
			RELEASE FOR PRODUCTION					
NEXT ASSY	USED ON	REEVES DE1039IA	NO.	APPROVED	DATE	CODE IDENT NO. 14979	SIZE B	DRAWING NO. 51623
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.			SCALE	WT.	SHEET

STANDARDBLUE, OMAHA 15429

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



FEB 16 1984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°–30'
BREAK EDGES .005–.015
MATERIAL .062 THICK NEOPRENE 40 DUROMETER

DO NOT SCALE DRAWING

DRAWN	M WEST	5-27-83
CHECKED		
PROJ. ENG.	M WEST	5-27-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION		
NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE
HARD MOUNT GASKET

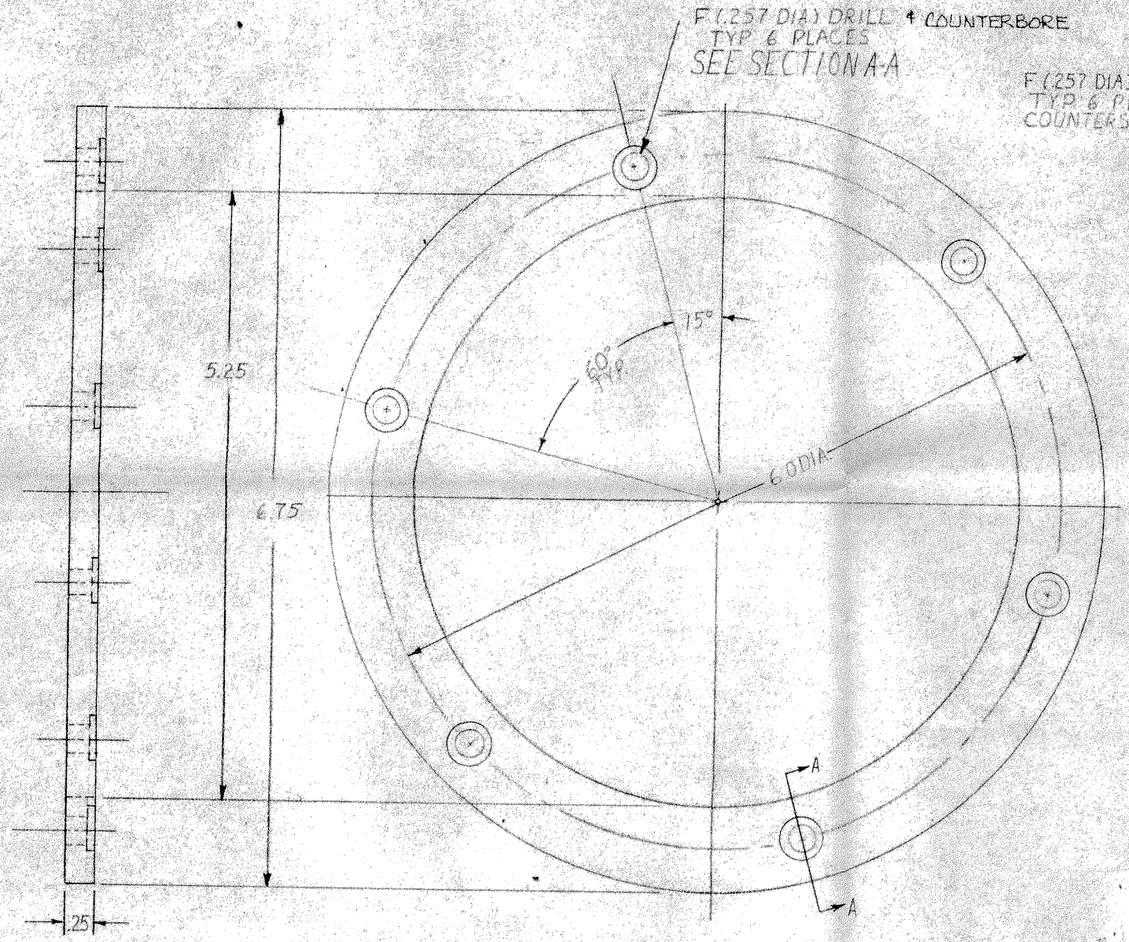
CODE IDENT NO.	SIZE	DRAWING NO.
14979	C	51624

SCALE	WT.	SHEET

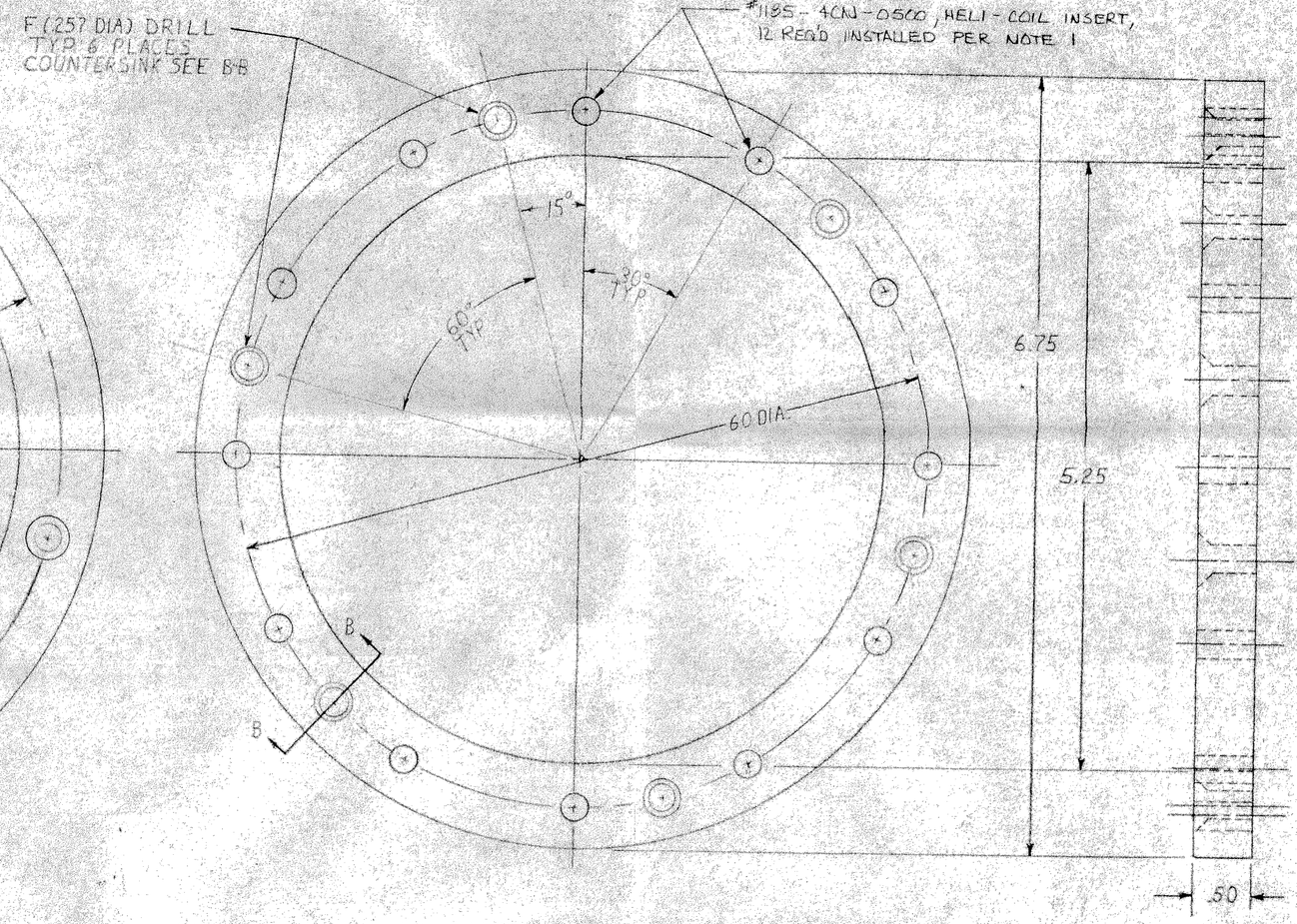
STANDARDBLUE, OMAHA 68127

4 3 2 1

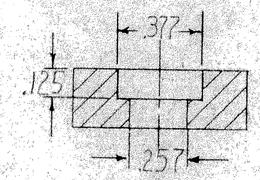
REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



INNER RING

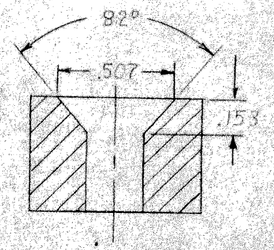


OUTER RING



SECTION A-A

NOTES: 1. DRILL 17/64 $^{+.261}_{-.269}$ DIA. HOLE ON 6.00 DIA. BOLT CIRCLE, COUNTERSINK 120° x $^{+.30}_{-.33}$ DIA., TAP THRU USING HELI-COIL TAP #4CPB-N2. INSTALL INSERT USING HELI-COIL TOOL #7551-4.



SECTION B-B

FEB 16 1984

		UNLESS OTHERWISE SPECIFIED	DRAWN	M. WEST	5-27-83
		DIMENSIONS ARE IN INCHES	CHECKED		
		TWO PLACE DECIMALS ± .03	PROJ. ENG.	M. WEST	5-27-83
		THREE PLACE DECIMALS ± .010	MFG.		
		FRACTIONS ±	Q. C.		
		ANGLES ± 0°-30'			
		BREAK EDGES .005-.015			
		MATERIAL			
		6061 T6 ALUM.			
			RELEASE FOR PRODUCTION		
			NO.	APPROVED	DATE
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.		

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

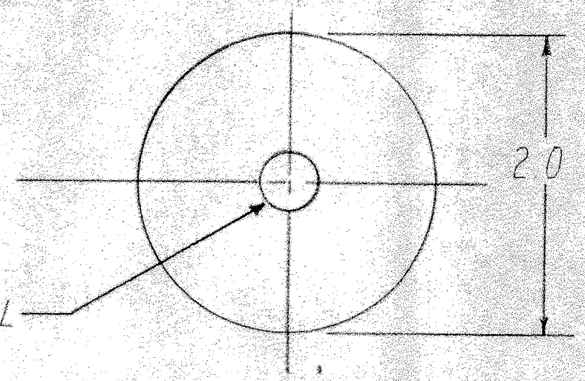
TITLE
INNER/OUTER HARD MOUNTING RINGS

CODE IDENT NO.	SIZE	DRAWING NO.
14979	C	51625

SCALE	WT.	SHEET

STANDARDBLUE, OMAHA 68137

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



MATERIAL THICKNESS - 3/16

NOTES: 1. OUTER EDGES MUST BE BUFFED TO REMOVE ANY SHARPNESS

FEB 161984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°–30'
BREAK EDGES .005–.015

MATERIAL: 304 STAINLESS

DO NOT SCALE DRAWING

DRAWN	M WEST	2-27-83
CHECKED		
PROJ. ENG.	M WEST	2-27-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

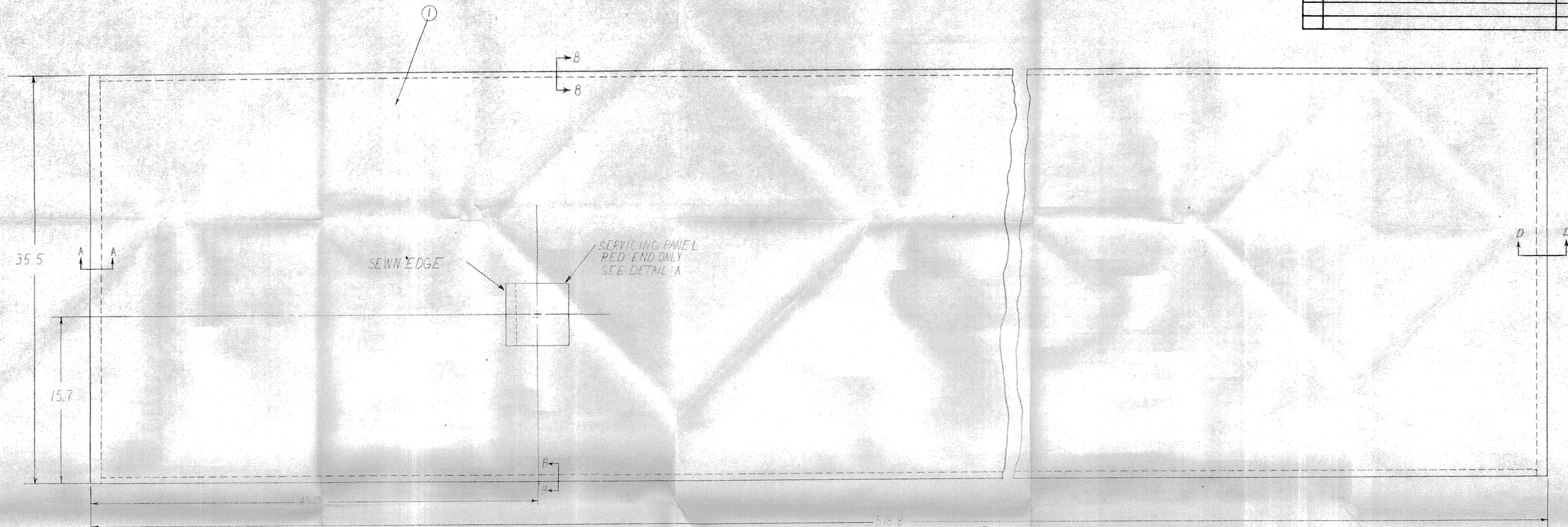
TITLE: LARGE DIA WASHER

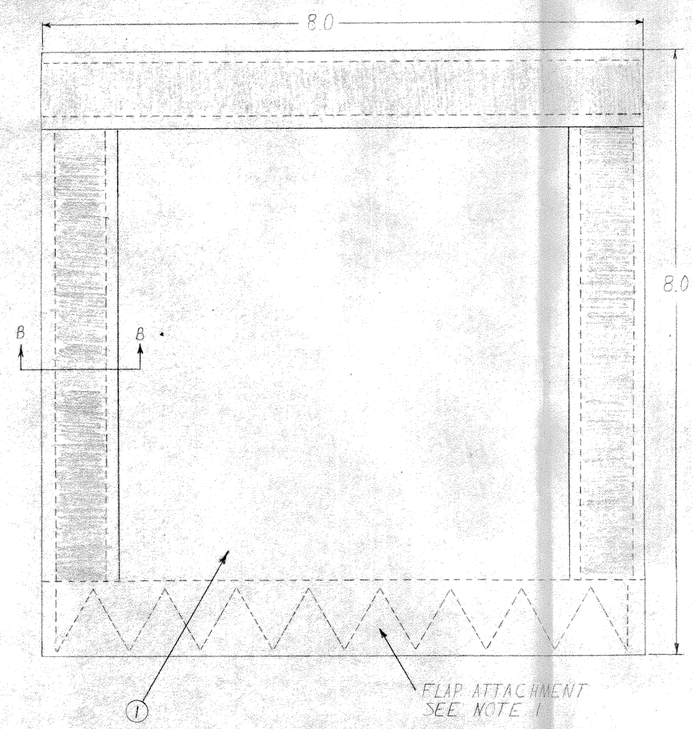
CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	51626

SCALE	WT.	SHEET

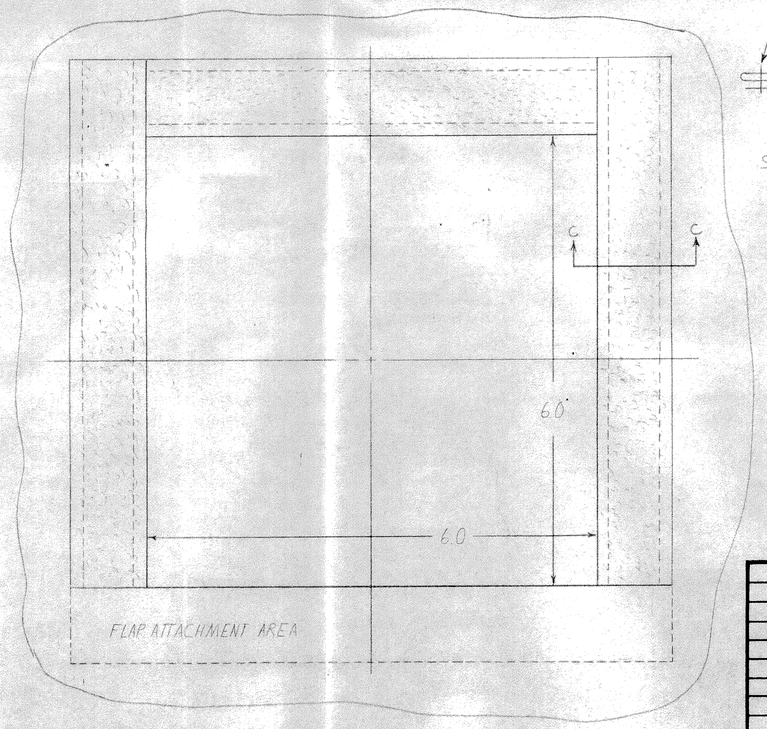
STANDARDBLUE, OMAHA 15429

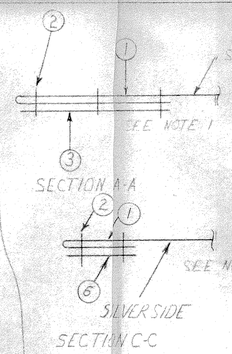
REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

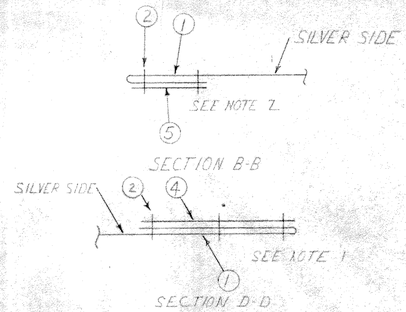




DETAIL A SERVICING PANEL







NOTES: 1. STITCH TYPE 301, SINGLE NEEDLE, 5-8 STITCHES PER INCH.
2. STITCH TYPE 301, DOUBLE NEEDLE, 1/2" GA 5-8 STITCHES PER INCH.

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
AR	FASTENER TAPE, HOOK 1"		MIL-F-21840 D		SEAR ENDS	6
AR	FASTENER TAPE, PILE 1"		TYPE II CLI NYLON		SEAR ENDS	5
AR	FASTENER TAPE, HOOK 2"				SEAR ENDS	4
AR	FASTENER TAPE, PILE 2"				SEAR ENDS	3
AR	THREAD			V-T-285 TYPE I OR 2	SIZE E	2
AR	SKIRT/END PANEL MAT'L				REEVES DE10397	1

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

DRAWN	M.WEST	5-27-83
CHECKED		
PROJ. ENG.	M.WEST	5-27-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

DO NOT SCALE DRAWING
CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE
LDEFI SKIRTS

FEB 161994

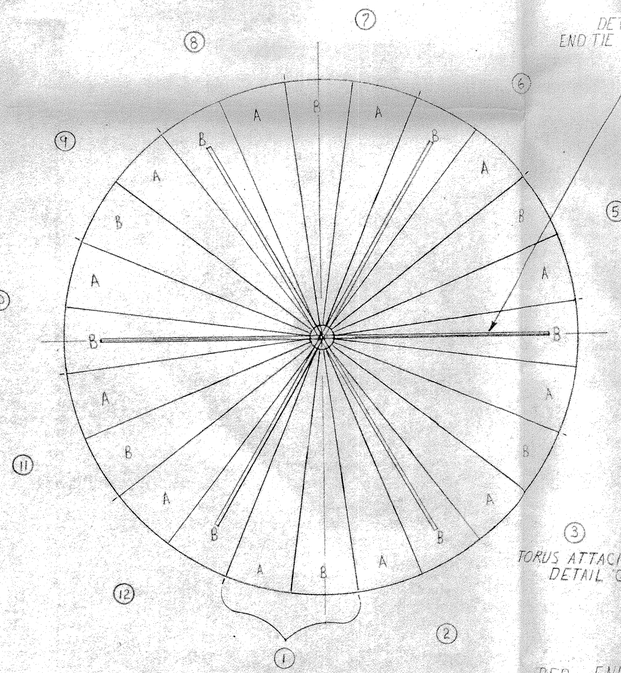
CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	D-51627

SCALE | WT. | SHEET

STANDARD BLUE, OMAHA 37101

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

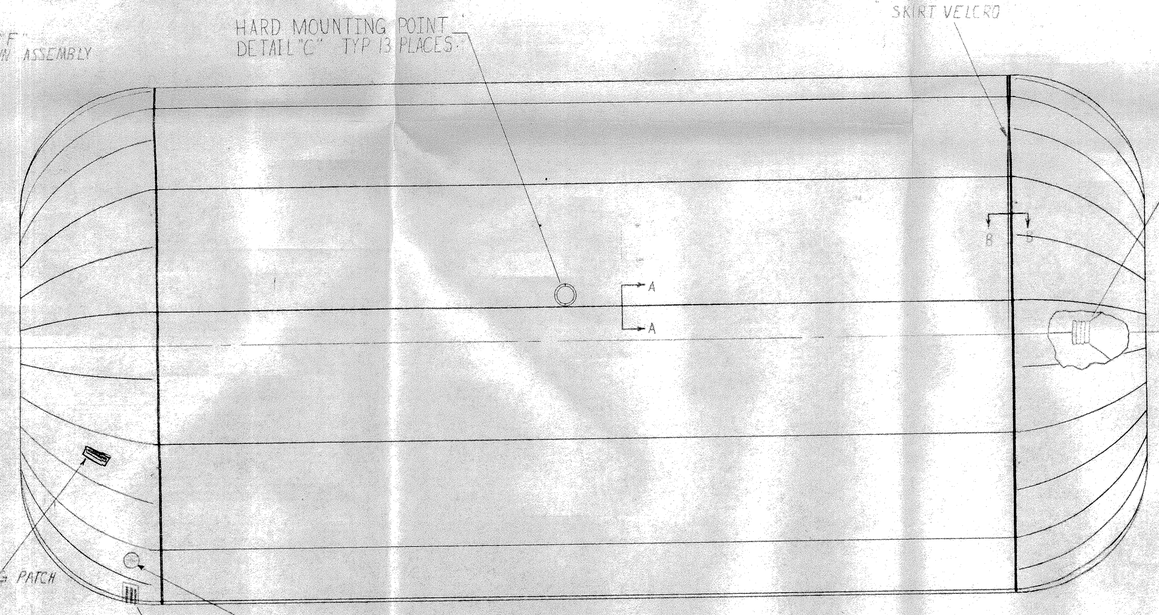
LDEFI IS CONSTRUCTED OF 12 MAJOR GORES
ENDS OF MAJOR GORES SUBDIVIDE TO FORM MINOR
GORES TO FORM INVERTED ENDS

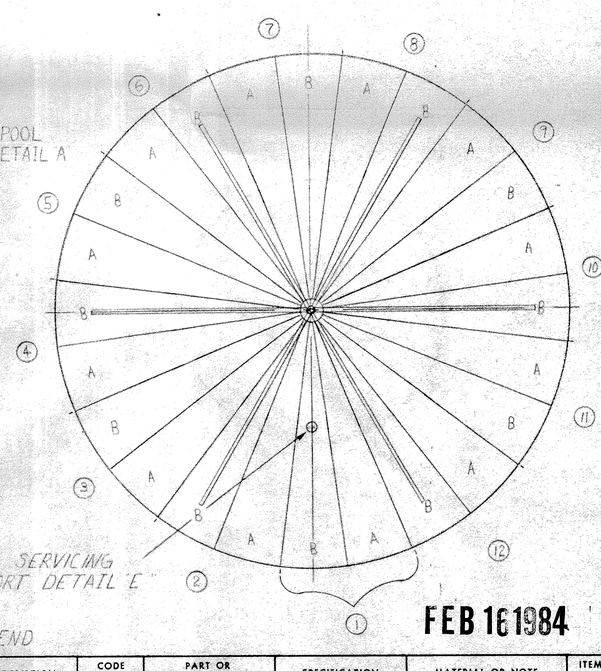


DETAIL "F"
END TIE DOWN ASSEMBLY

TORUS ATTACHING PATCH
DETAIL "G"

RED END





SPOOL
DETAIL A

SERVICING
PORT DETAIL "E"

BLUE END

FEB 16 1984

QTY. REQ'D	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015

MATERIAL

DO NOT SCALE DRAWING

DRAWN	N. WEST	5-27-83
CHECKED		
PROJ. ENG.	N. WEST	5-27-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

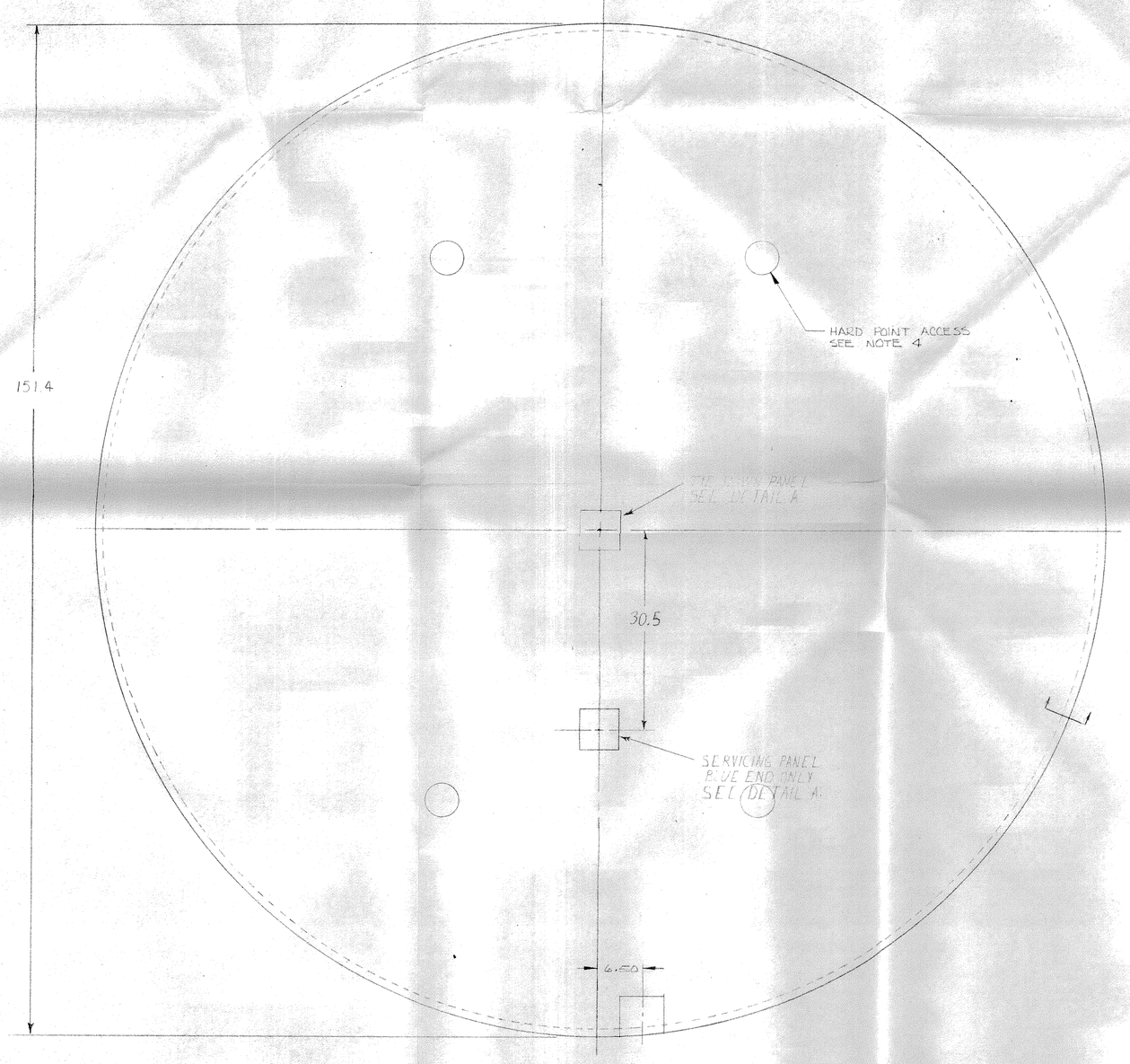
TITLE
LDEFI MAIN ENVELOPE

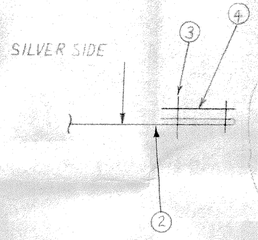
CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	51628

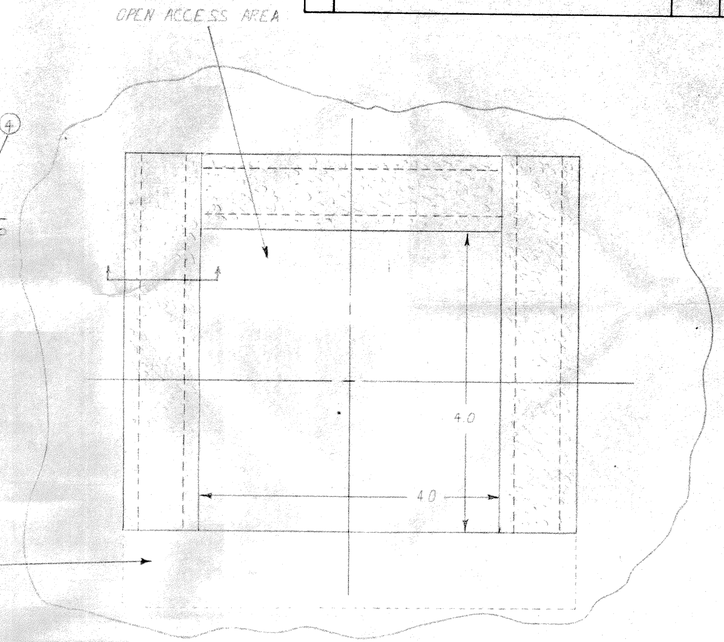
SCALE | WT. | SHEET 1 OF 4

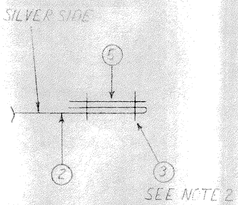
STANDARD BLUE, OMAHA 27101

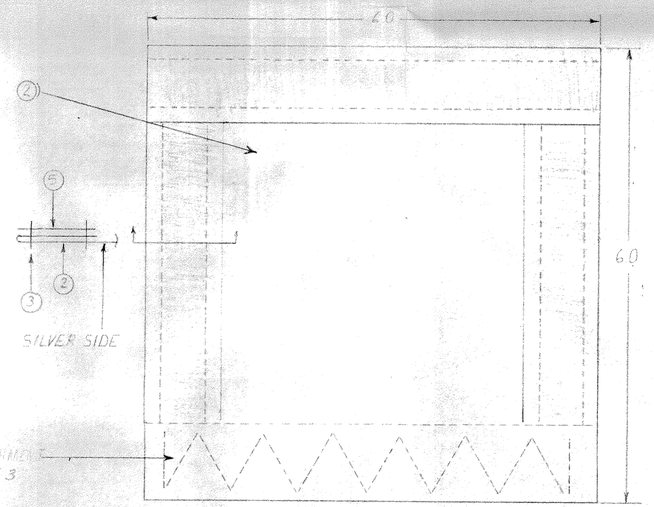
REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED











DETAIL "A" PANEL AND OPENING

NOTES: 1. SEE DRAWING D-51631 FOR INSTRUCTIONS ON LAYOUT AND ATTACHMENT OF BALLAST POCKET
2. STITCH TYPE 301, DOUBLE NEEDLE, ½" GA 5 8 STICHES PER INCH
3. STITCH TYPE 301, SINGLE NEEDLE, 5-8 STITCHES PER INCH
4. WITH END PANEL INSTALLED ON INFLATED LDEF1, MARK LOCATIONS OF 4 HARD POINTS, REMOVE AND CUT ACCESS HOLES.

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

DO NOT SCALE DRAWING

DRAWN	M. WEST	5-21-13
CHECKED		
PROJ. ENG.	M WEST	5-21-13
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

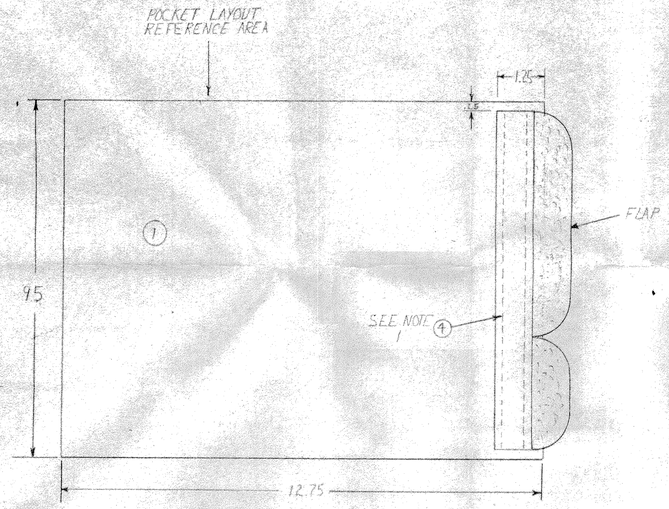
TITLE
END PANEL LDEF1
FEB 16 1984

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	51630

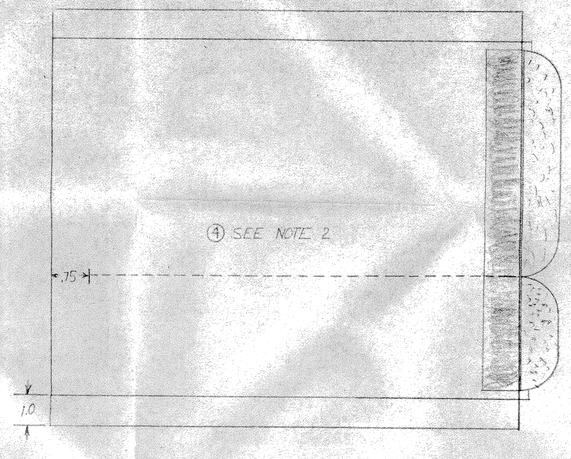
SCALE | WT. | SHEET

STANDARDBLUE, OMAHA 27101

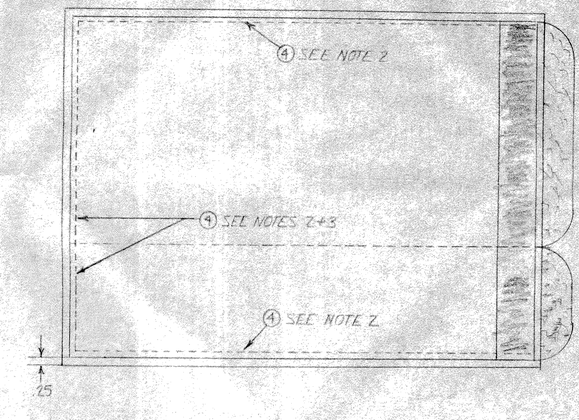
REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



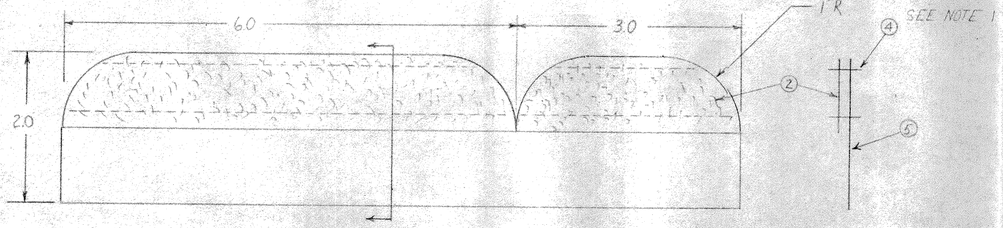
STEP 1: LAY OUT POCKET REFERENCE AREA AND SEW ON FLAP AS SHOWN



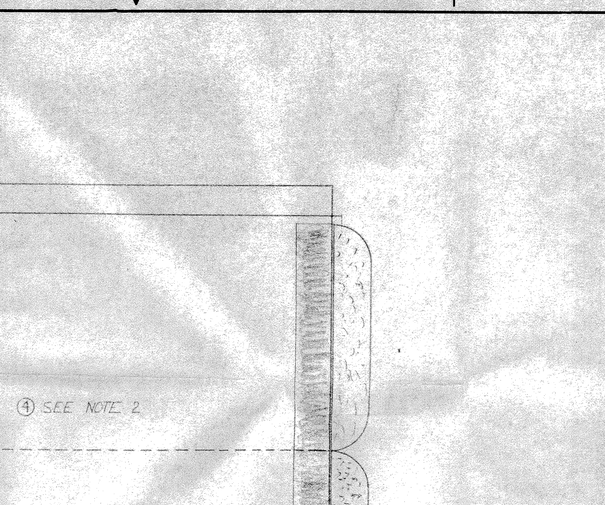
STEP 2: SEW POCKET LAY FLAT TO PANEL AS SHOWN



STEP 3: SEW SEAMS WITH 1/4" ROLL UNDER AND TUCKS PER NOTE 3



FLAP



POCKET LAYFLAT

NOTES:

1. STITCH TYPE 301, DOUBLE NEEDLE, 1/8 GA 5-8 STITCHES PER IN.
2. STITCH TYPE 301, SINGLE NEEDLE, 5-8 STITCHES PER IN.
3. FULLNESS (1" EACH STITCHING) TO BE TAKEN UP WITH A TUCK AT EACH INTERSECTING LINE OF STITCHING.

FEB 161984

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
AR	REEVES SILVER URE COATED					5
AR	THREAD			V-T-295 TY 1 OR 2	SIZE F	4
AR	FASTENER TAPE, PILE 1"			MIL-F-21840D TYPE 2 CLASS 1 NYLON		3
AR	FASTENER TAPE, HOOK 1"					2
AR	REEVES WHITE SILV URE COATED			RBAD		1

LIST OF MATERIALS OR PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO-PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015

MATERIAL
AS SHOWN

DRAWN	M. WEST	10-15-85
CHECKED		
PROJ. ENG.	M. WEST	10-15-85
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

DO NOT SCALE DRAWING

NEXT ASSY | USED ON
APPLICATION

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE
BALLAST POCKET

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	51631

SCALE | WT. | SHEET

STANDARDBLUE, OMAHA STD101

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

CODE IDENT NO.	PL	REV
14979	51630	

RELEASE FOR PRODUCTION		
NO.	APPROVED	DATE

CONTRACT NO.

SHEET

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED

ITEM NOMENCLATURE

END PANEL

FEB 16 1984

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT.	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.	LINE NO.
						1	1
AR	SKIRT/END PANEL MAT'L				REEVES DE 10397	2	2
AR	THREAD			V-T-295 TYPE I CLASS 2	SIZE F	3	3
AR	FASTENER TAPE, HOOK 1"			MIL-F-21840 D	SEAM ENDS	4	4
AR	FASTENER TAPE, PILE 1"			TYPE CL I NYLON	SEAM ENDS	5	5
							6
							7
							8
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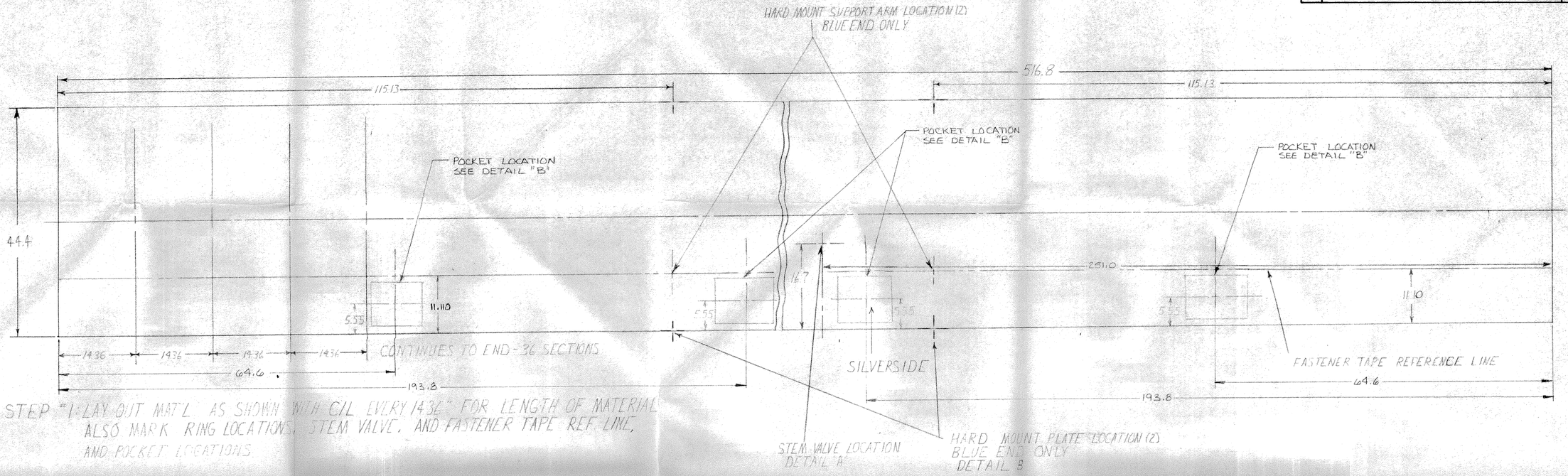
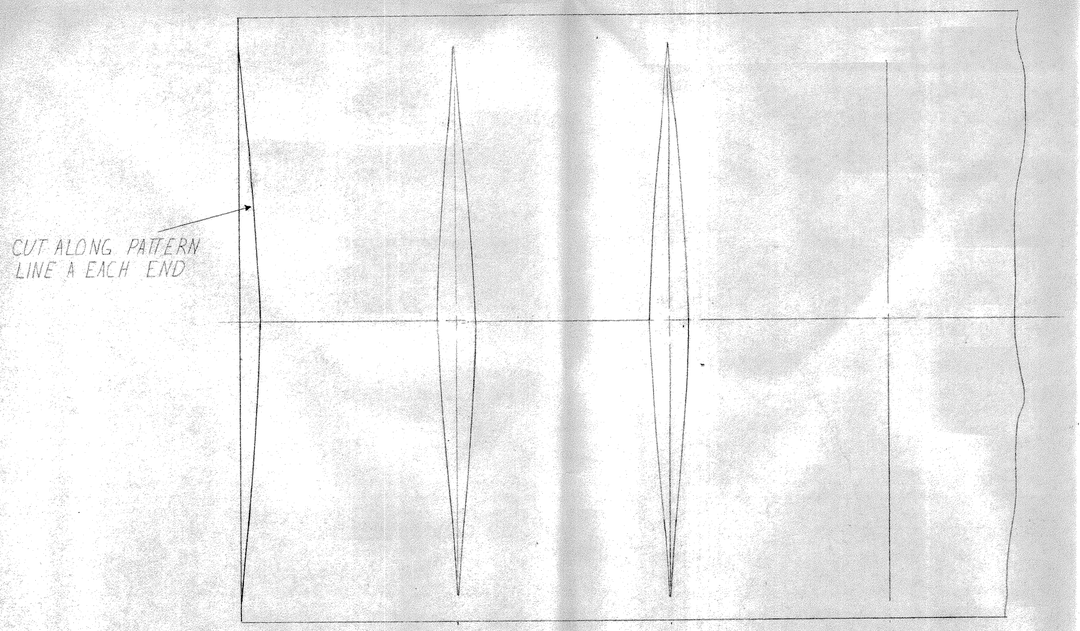
							39

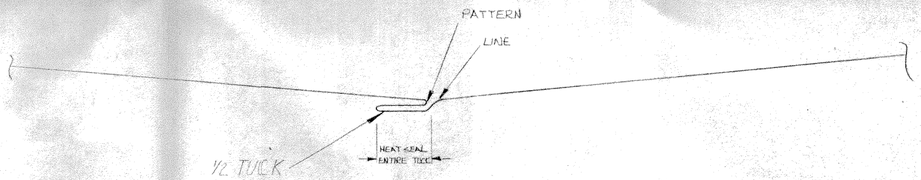
REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



STEP #1: LAY OUT MAT'L AS SHOWN WITH C/L EVERY 1436" FOR LENGTH OF MATERIAL ALSO MARK RING LOCATIONS, STEM VALVE, AND FASTENER TAPE REF. LINE, AND POCKET LOCATIONS.



STEP #2: MARK OUTLINE OF TUCK TO BE MADE AT EACH C/L SEE PATTERN-SHEET 4



STEP #3: PLACE ADHESIVE ON TUCK PATTERN AREA IF NECESSARY. FOLD TUCK AT ℄ AND ADHERE TWO HALVES OF TUCK. USE HOT WHEEL SEALER AND SEAL TUCK IN PLACE.

FEB 16 1984

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
LIST OF MATERIALS OR PARTS LIST						

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO-PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015

MATERIAL: REEVES DE 10391A

DO NOT SCALE DRAWING

DRAWN	M. WEST	6-16-83
CHECKED		
PROJ. ENG.	M. WEST	6-16-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION		
NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE: LDEFI TORUS

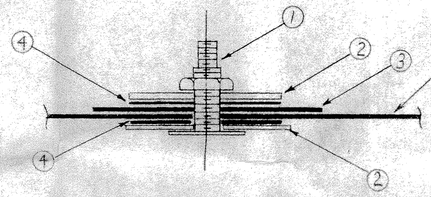
CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	51635

SCALE	WT.	SHEET
		1 OF 4

STANDARDBLUE, OMAHA 37101

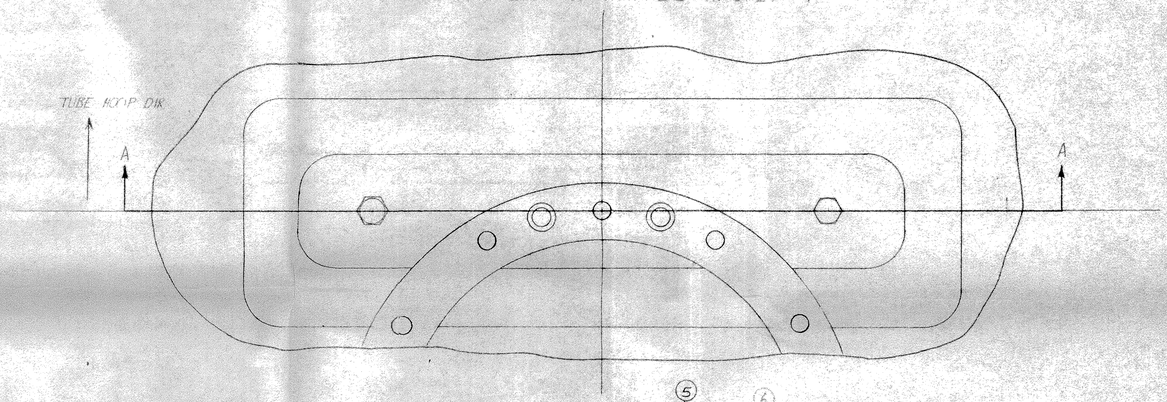
REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

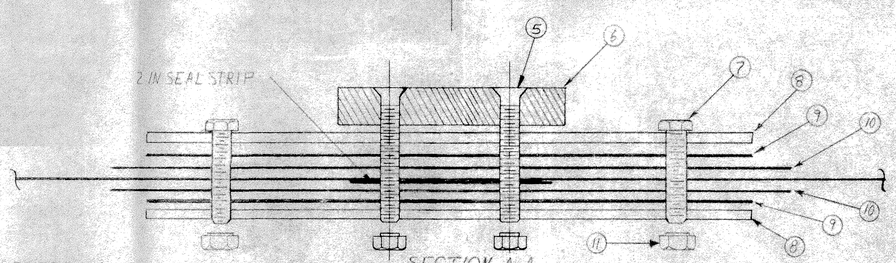
STEP #5: FORM LAYFLAT INTO TUBE USING 2 IN. SEAL STRIP ON INSIDE OF BUTT SEAM



DETAIL 'A' STEM VALVE MOUNT

STEP #4: INSTALL STEM VALVE IN LOCATION MARKED IN STEP #1





SECTION A-A

STEP #6: INSTALL THE HARD MOUNT RINGS (BLUE END ONLY) BY INSTALLING THE MOUNT PLATES AS LOCATED IN STEP #1

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
3	SELF CLENCHING NUTS		1/4-20			11
2	TORUS HARD MOUNT DOUBLER		B-51673		REEVES DE10391A	10
2	TORUS HARD MOUNT GASKET		B-51674			9
2	TORUS HARD MOUNT PLATE		B-51672		6061 T6 ALUM.	8
2	HEX HEAD SCREW		1/4-20			7
1	OUTER HARD MOUNT RING		C-51670		6061 T6 ALUM	6
1	FLAT HEAD SCREW HEX SOCKET		1/4-20			5
2	GASKETS		B-51622		.062 NEOPRENE 40 DUROMETER	4
1	DOUBLER		B-51623		REEVES DE 10391A	3
2	LARGE DIA WASHERS		B-51626		304 STAINLESS	2
1	TIRE VALVE					1

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

DO NOT SCALE DRAWING

DRAWN	M. WEST	6-16-83
CHECKED		
PROJ. ENG.	M. WEST	6-16-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE: LDEFI TORUS

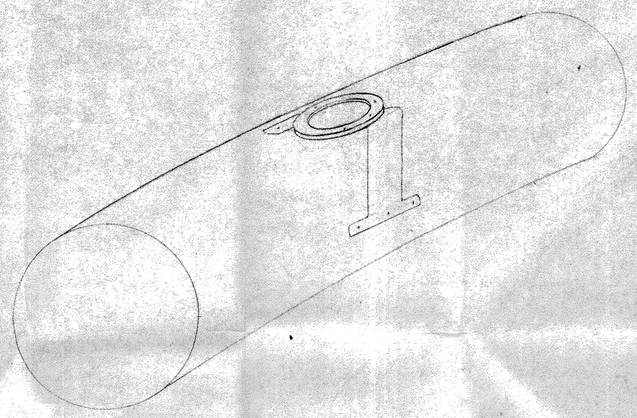
FEB 16 1984

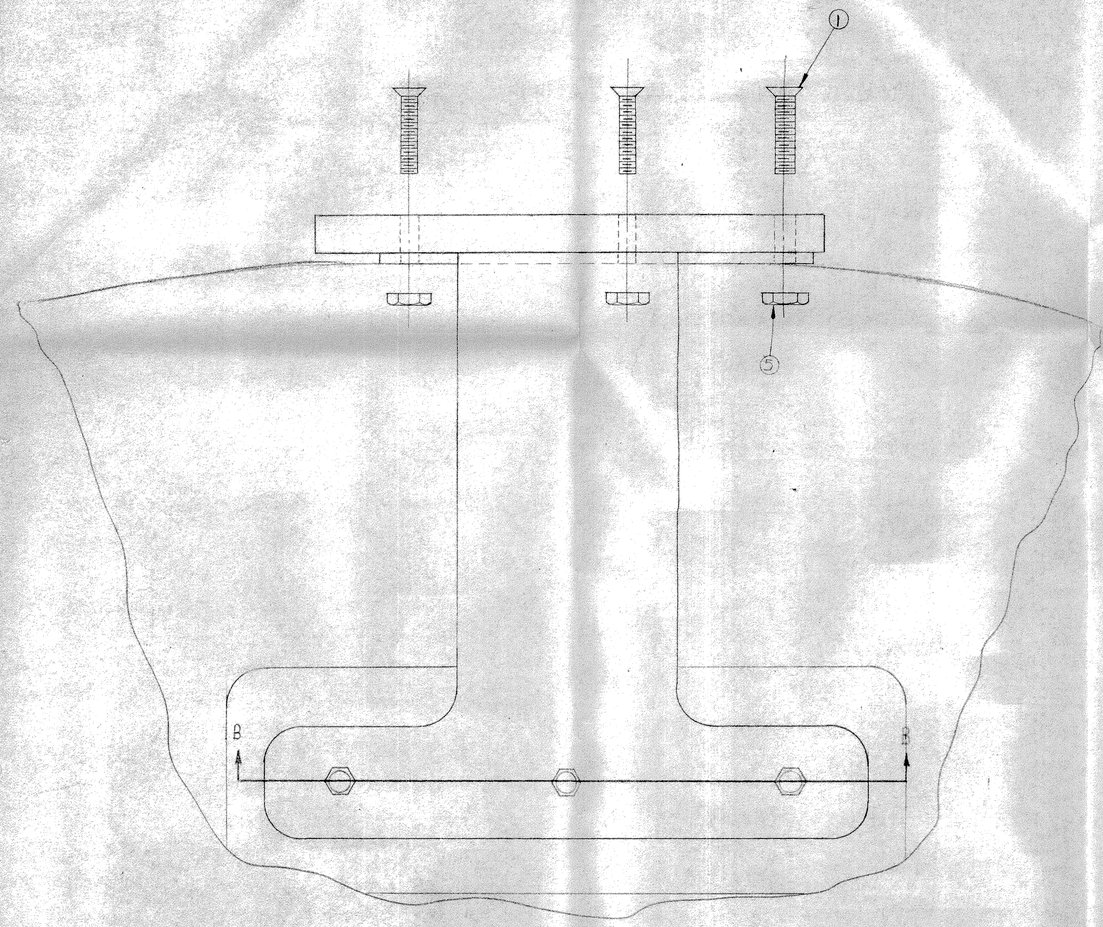
CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	51635

SCALE | WT. | SHEET 2 OF 4

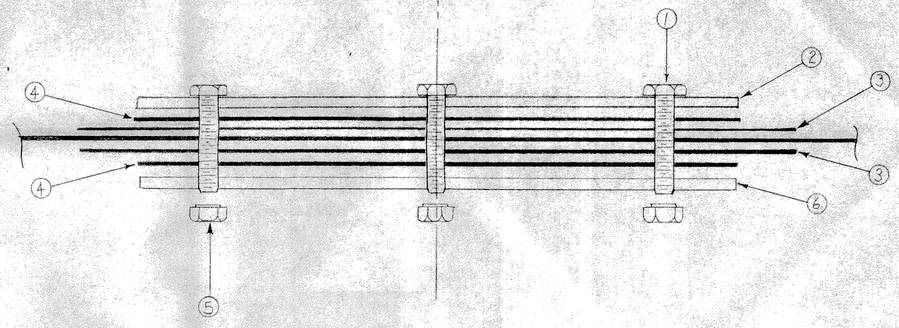
STANDARDBLUE, OMAHA 27101

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED





STEP #7: INSTALL THE SECOND HARD MOUNT RING ATTACHMENT (SUPPORT ARM BLUE END ONLY) AT LOCATIONS IN STEP #1. CONNECT SUPPORT ARM TO RING.



SECTION B-B

FEB 161984

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
6	TORUS HARD MOUNT PLATE		B-51639		6061 T6 ALUM.	6
3	HEX NUT		1/4-20			5
2	TORUS HARD MOUNT GASKET		B-51641		.062 NEOPRENE 40 DUROMETER	4
2	TORUS HARD MOUNT DOUBLER		B-51640		REEVES 10391A	3
1	HARD MOUNT SUPPORT ARM		C-51638		6061 T6 ALUM.	2
3	HEX SOCKET - FLAT HEAD SCREW		1/4-20			1

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

DO NOT SCALE DRAWING

DRAWN	M. WEST	6-16-83
CHECKED		
PROJ. ENG.	M WEST	6-16-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

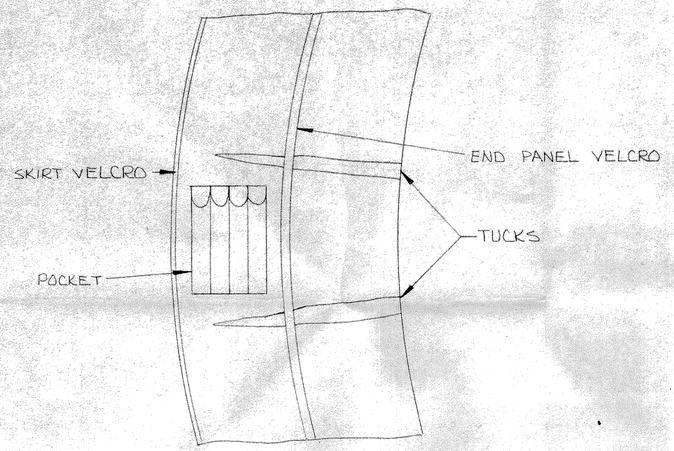
TITLE
LDEF1 TORUS

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	51635

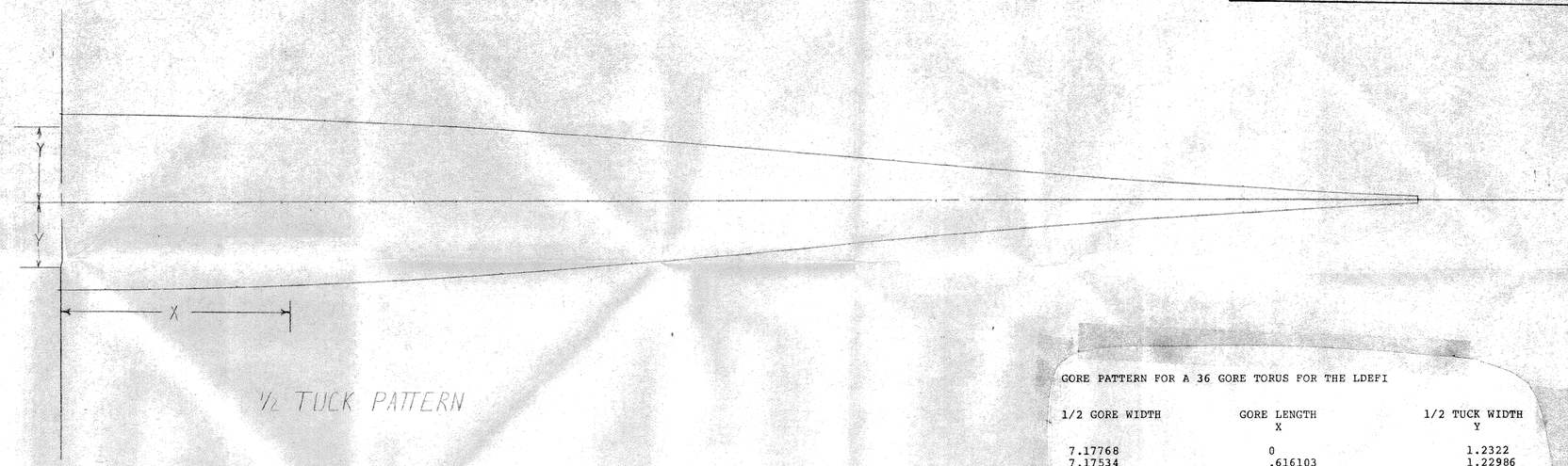
SCALE | WT. | SHEET 3 OF 4

STANDARDBLUE, OMAHA 97101

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



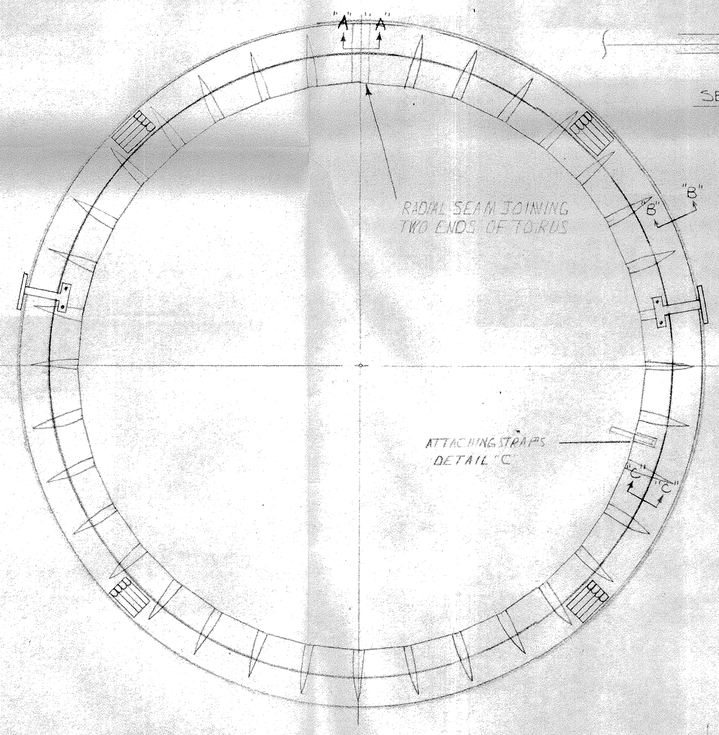
DETAIL "B"



½ TUCK PATTERN

GORE PATTERN FOR A 36 GORE TORUS FOR THE LDEFI

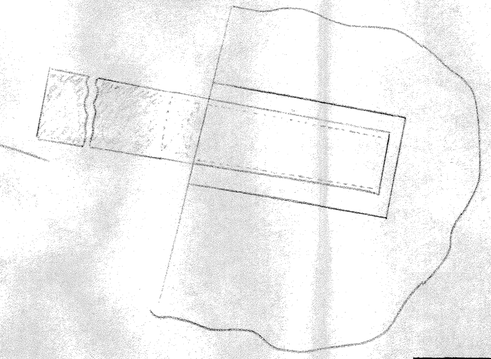
1/2 GORE WIDTH	GORE LENGTH X	1/2 TUCK WIDTH Y
7.17768	0	1.2322
7.17534	.616103	1.22986
7.16833	1.23221	1.22284
7.15669	1.84831	1.21121
7.14053	2.46441	1.19505
7.11996	3.08051	1.17448
7.09514	3.69662	1.14966
7.06626	4.31272	1.12078
7.03354	4.92882	1.08806
6.99723	5.54492	1.05175
6.9576	6.16103	1.01212
6.91496	6.77713	.969483
6.86963	7.39323	.924152
6.82196	8.00934	.876476
6.7723	8.62544	.826819
6.72104	9.24154	.775559
6.66857	9.85764	.723085
6.61528	10.4737	.669796
6.56158	11.0898	.616099
6.50788	11.706	.562402
6.45459	12.3221	.509114
6.40212	12.9382	.45664
6.35086	13.5543	.40538
6.3012	14.1704	.355723
6.25353	14.7865	.308048
6.2082	15.4026	.262717
6.16556	16.0187	.220076
6.12593	16.6348	.180449
6.08962	17.2509	.144137
6.0569	17.867	.111418
6.02802	18.4831	.0825396
6.0032	19.0992	.0577216
5.98263	19.7153	.0371532
5.96647	20.3314	.0209913
5.95484	20.9475	9.35841E-03
5.94782	21.5636	.0023427
5.94548	22.1797	-9.53674E-07



SECTION "A"-"A"

SECTION "B"-"B"

SECTION "C"-"C"



DETAIL C TORUS ATTACHING STRAP

STEP #8 JOIN 2 OPEN ENDS OF TORUS TUBE FORMING CLOSED TORUS
STEP #9 ADHERE 1 IN HOOK FASTENER TAPE OVER BUTT SEAM WHICH FORMED TUBE
STEP #10 ADHERE 1 IN HOOK FASTENER TAPE OVER FASTENER TAPE REFERENCE LINE (STEP #1)
STEP #11 POSITION FOUR POCKETS AT POSITIONS LOCATED IN STEP #1 AND GLUE IN PLACE.

FEB 16 1984

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

DRAWN	M.WEST	6-14-83
CHECKED		
PROJ. ENG.	M.WEST	6-16-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

DO NOT SCALE DRAWING
CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

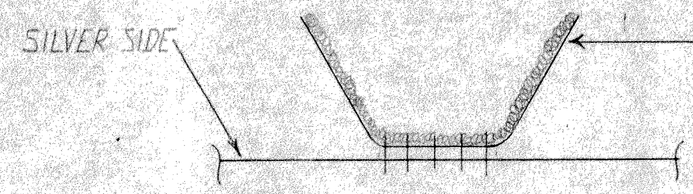
TITLE: LDEFI TORUS

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	51635

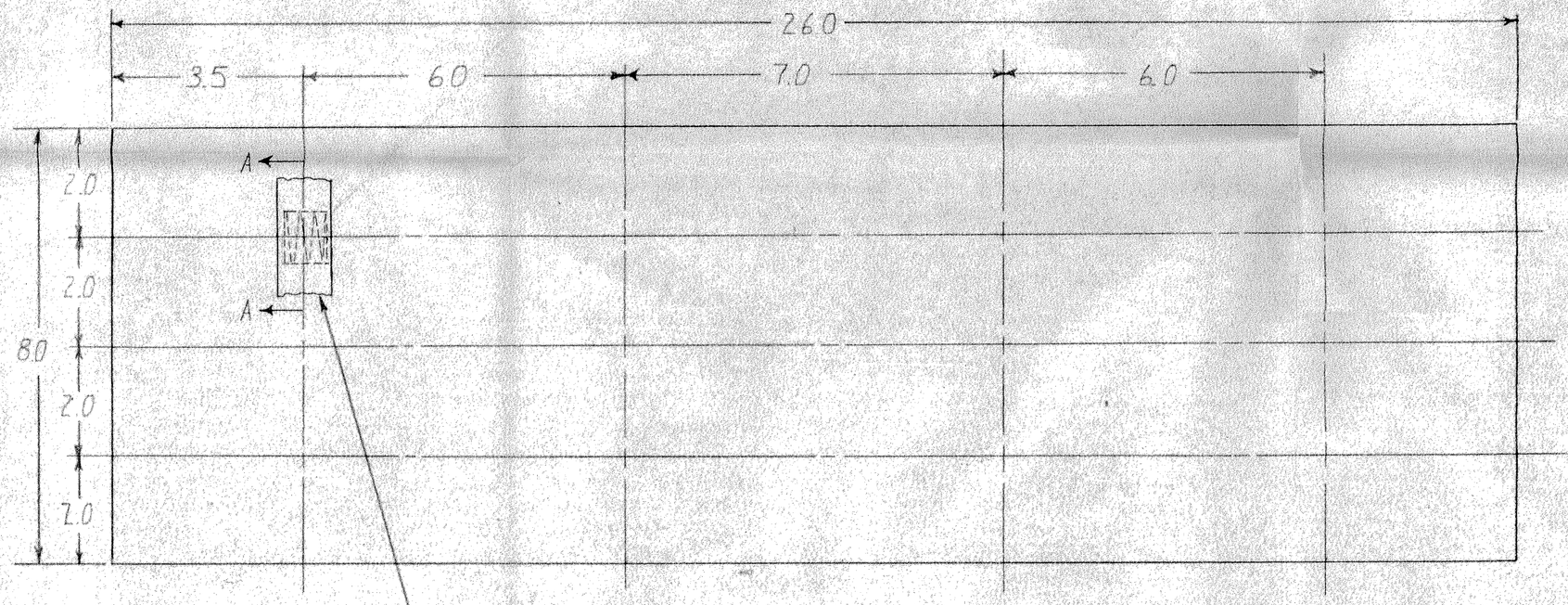
SCALE | WT. | SHEET 4 OF 4

STANDARDBLUE, OMAHA 67101

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



"A" - "A"

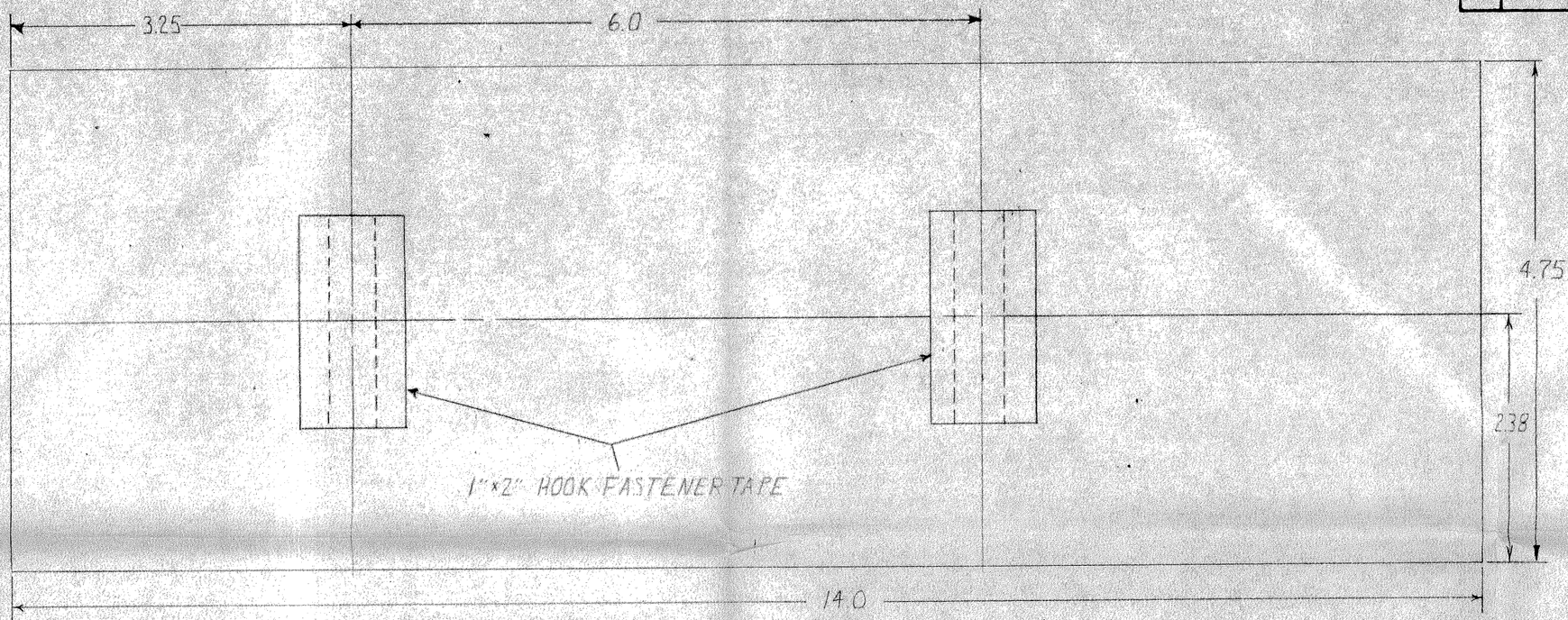


FEB 16 1984

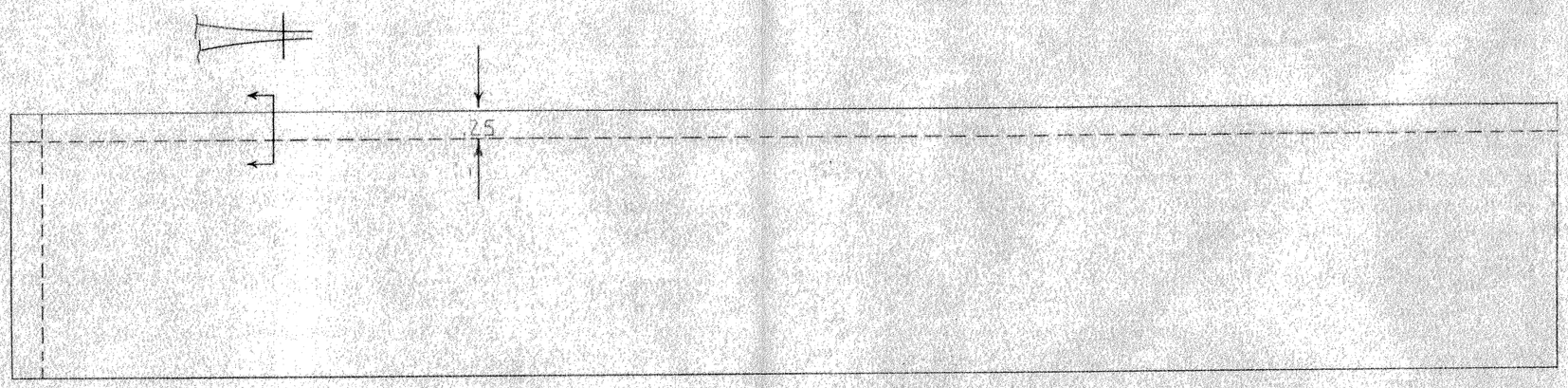
		UNLESS OTHERWISE SPECIFIED	DRAWN	M. WEST	6-16-83	RAVEN industries, inc. SIOUX FALLS, SOUTH DAKOTA
		DIMENSIONS ARE IN INCHES TWO PLACE DECIMALS ± .03 THREE PLACE DECIMALS ± .010 FRACTIONS ± ANGLES ± 0°–30' BREAK EDGES .005–.015	CHECKED			
			PROJ. ENG.	M. WEST	6-16-83	TITLE GROSS BALLAST ATTACHING PATCH
			MFG.			
		MATERIAL REEVES DE10391A	Q. C.			
						CODE IDENT NO. 14979 / SIZE C / DRAWING NO. 51636
NEXT ASSY	USED ON		RELEASE FOR PRODUCTION			
			NO.	APPROVED	DATE	
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.			SCALE / WT. / SHEET

STANDARDBLUE, OMAHA 28627

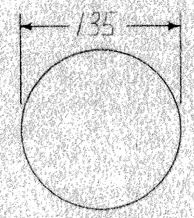
REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



LAY FLAT



FOLD OVER AND STITCH SIDE + END
FOLD WITH VELCRO ON INSIDE



FILLED TUBE PROFILE

NOTES: 1. AFTER STITCHING SIDE AND END, TURN TUBE INSIDE OUT.
2. FILL TUBE WITH LEAD SHOT TO A NOMINAL WEIGHT OF 3.75 LBS. STITCH FIN SEAM IN OPEN END AND TRIM EXCESS MATERIAL.
3. STITCH TYPE 301, SINGLE NEEDLE 5-8 STITCHES PER INCH.

FEB 16 1984

		UNLESS OTHERWISE SPECIFIED	DRAWN	M. WEST	6-16-83
		DIMENSIONS ARE IN INCHES	CHECKED		
		TWO PLACE DECIMALS ± .03	PROJ. ENG.	M. WEST	6-16-83
		THREE PLACE DECIMALS ± .010	MFG.		
		FRACTIONS ±	Q. C.		
		ANGLES ± 0°-30'			
		BREAK EDGES .005-.015			
		MATERIAL: COATED TAFFETTA LOGGING BALLON SKIRT MATERIAL			
			RELEASE FOR PRODUCTION		
			NO.	APPROVED	DATE
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.		

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

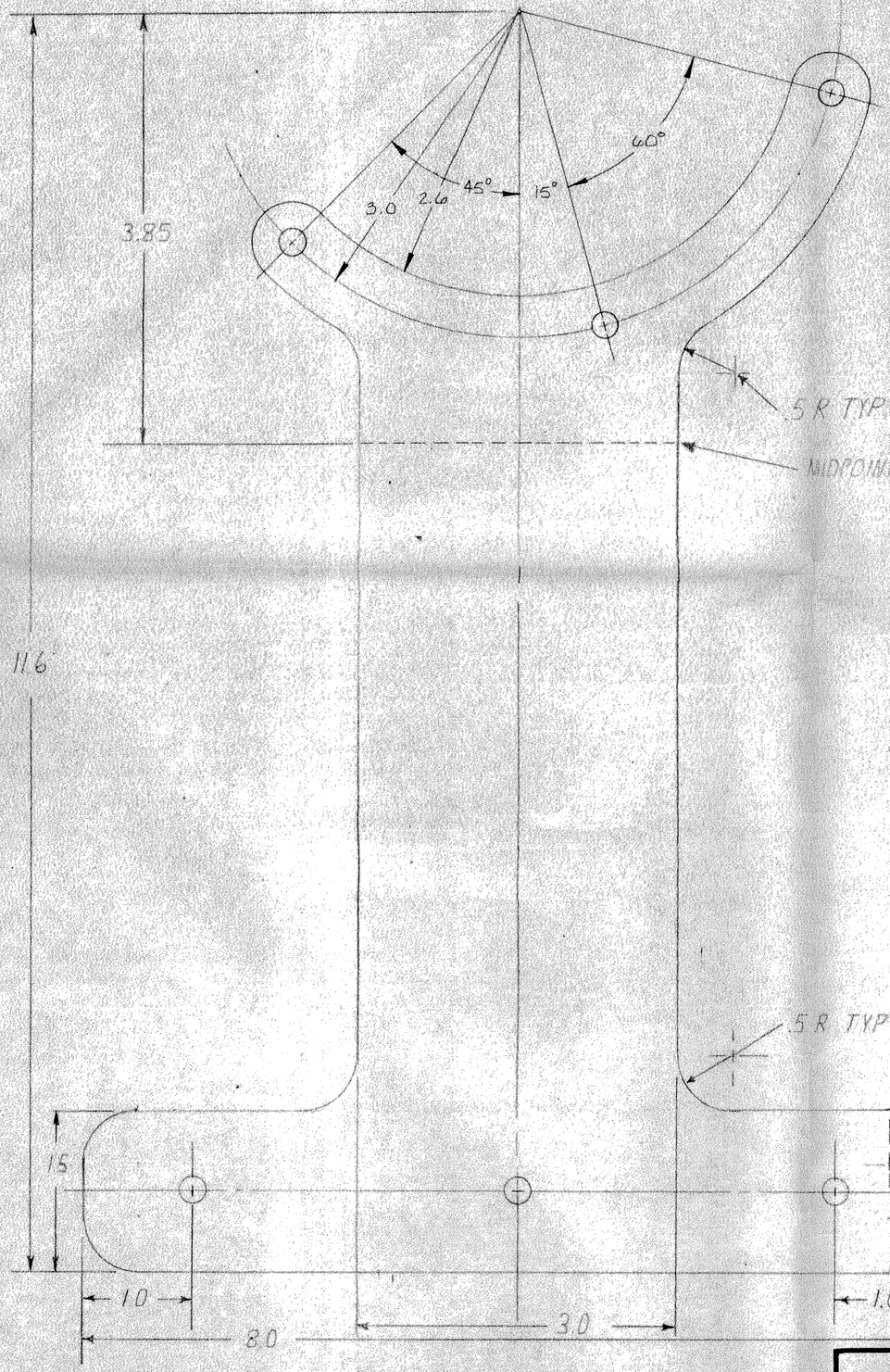
TITLE: GROSS BALLAST WEIGHTS

CODE IDENT NO.	SIZE	DRAWING NO.
14979	C	51637

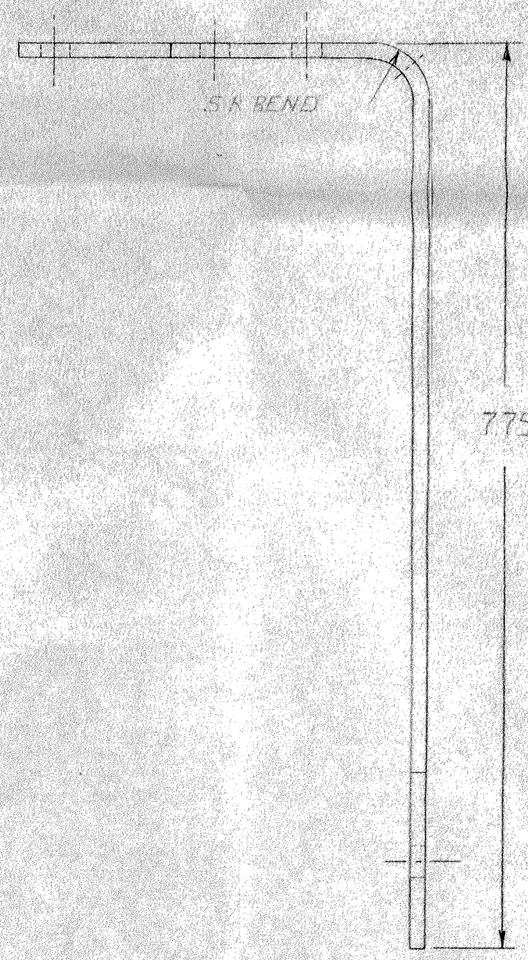
SCALE	WT.	SHEET

STANDARDBLUE, OMAHA 68127

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



F (.257 DIA) DRILL
TYPICAL 6 PLACES



FEB 161984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°–30'
BREAK EDGES .005–.015

MATERIAL
AL 6061-T6-1/8

DO NOT SCALE DRAWING

DRAWN	M WEST	6-16-83
CHECKED		
PROJ. ENG.	M WEST	6-16-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

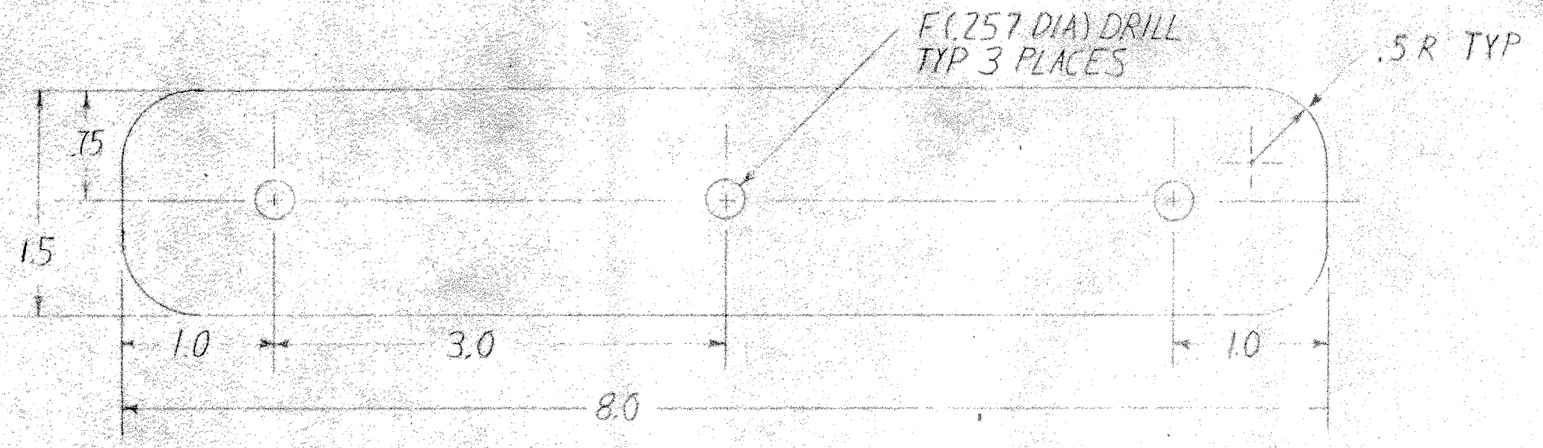
TITLE
HARD MOUNT SUPPORT ARM

CODE IDENT NO.	SIZE	DRAWING NO.
14979	C	51638

SCALE | WT. | SHEET

STANDARD BLUE, OMAHA 68127

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



BUFF ALL EDGES SMOOTH

FEB 161984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°–30'
BREAK EDGES .005–.015

MATERIAL AL 6061-T6 1/8

DO NOT SCALE DRAWING

DRAWN		
CHECKED		
PROJ. ENG.		
MFG.		
Q. C.		
RELEASE FOR PRODUCTION		
NO	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

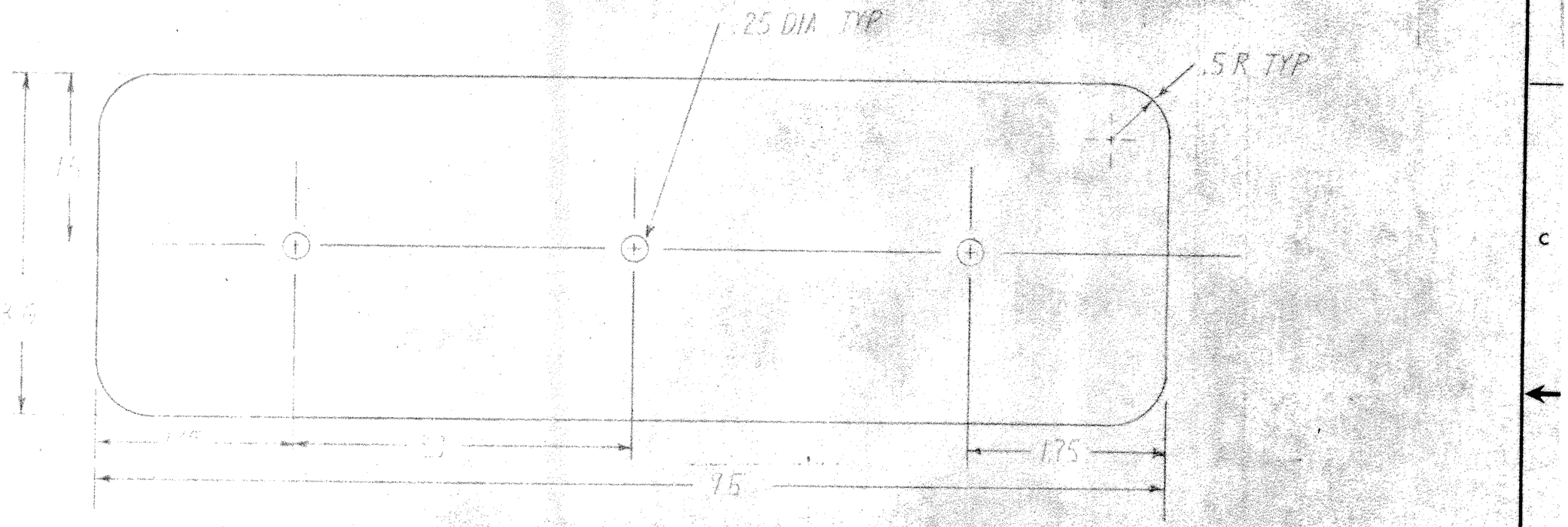
TITLE TORQUE ARM JOINT PLATE

CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	S1631

SCALE	WT.	SHEET

STANDARDBLUE, OMAHA 15-429

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



FEB 16 1984

		UNLESS OTHERWISE SPECIFIED	DRAWN		
		DIMENSIONS ARE IN INCHES	CHECKED		
		TWO PLACE DECIMALS ± .03	PROJ. ENG.		
		THREE PLACE DECIMALS ± .010	MFG.		
		FRACTIONS ±	Q. C.		
		ANGLES ± 0°–30'			
		BREAK EDGES .005–.015			
		MATERIAL			
		REEVES DE1039 1A			
NEXT ASSY	USED ON		RELEASE FOR PRODUCTION		
			NO.	APPROVED	DATE
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.		

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

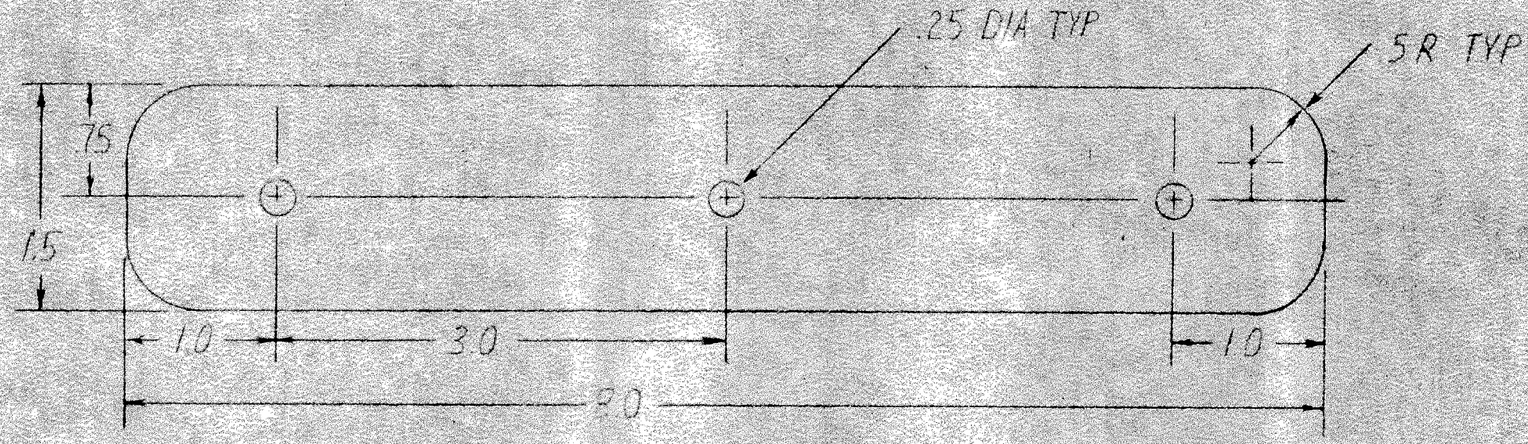
TITLE: TORUS HARD MOUNT DOUBLER

CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	51640

SCALE	WT.	SHEET

STANDARDBLUE, OMAHA 19429

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



FEB 161984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°–30'
BREAK EDGES .005–.015

MATERIAL .062 THK NEOPRENE 40 DUROMETER

DO NOT SCALE DRAWING

DRAWN	M WEST	6-1-83
CHECKED		
PROJ. ENG.	M WEST	6/6/83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION		
NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

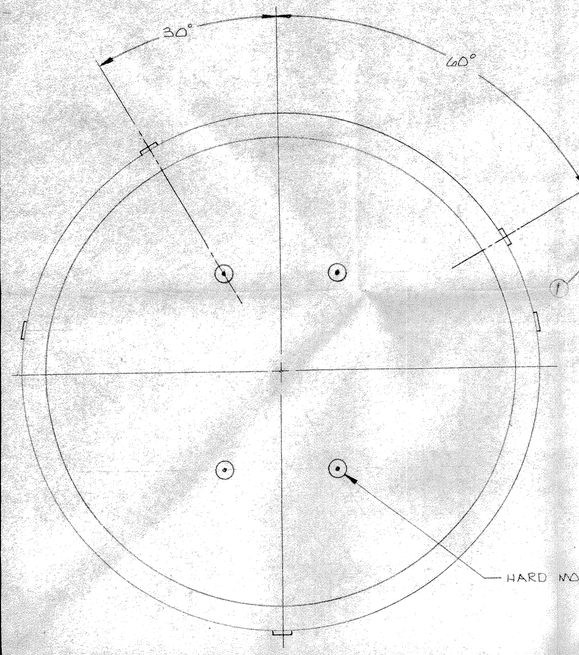
TITLE
TORUS HARD MOUNT GASKET

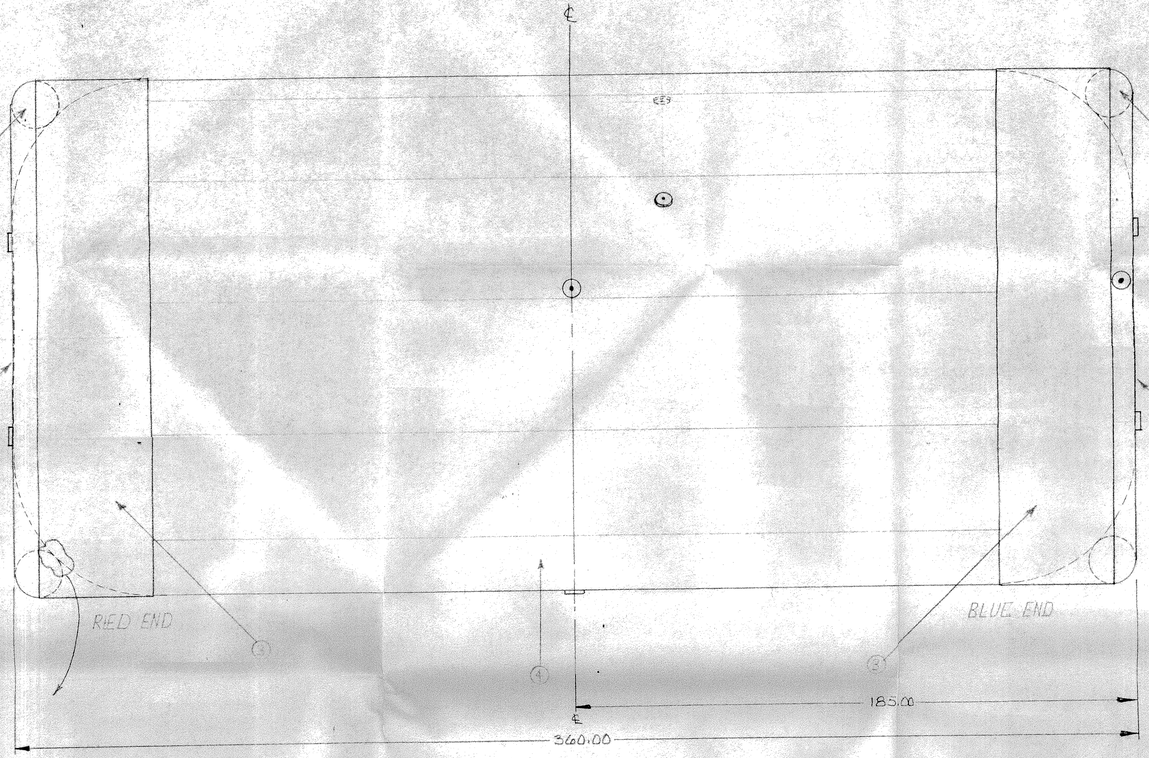
CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	51641

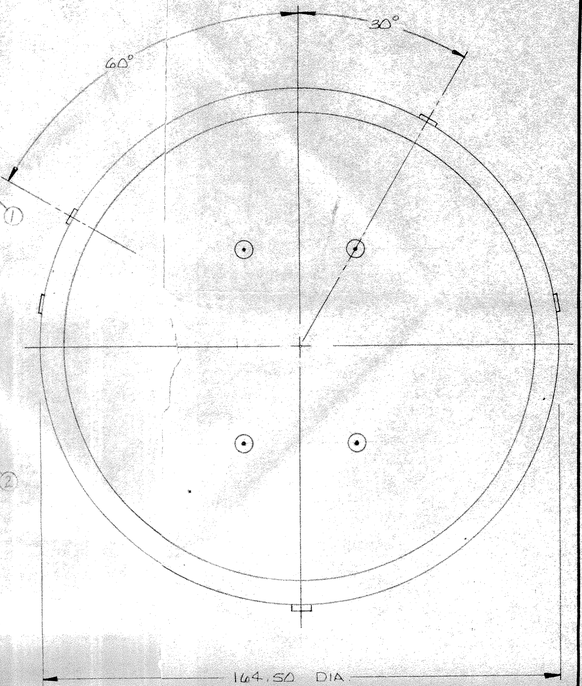
SCALE | WT. | SHEET

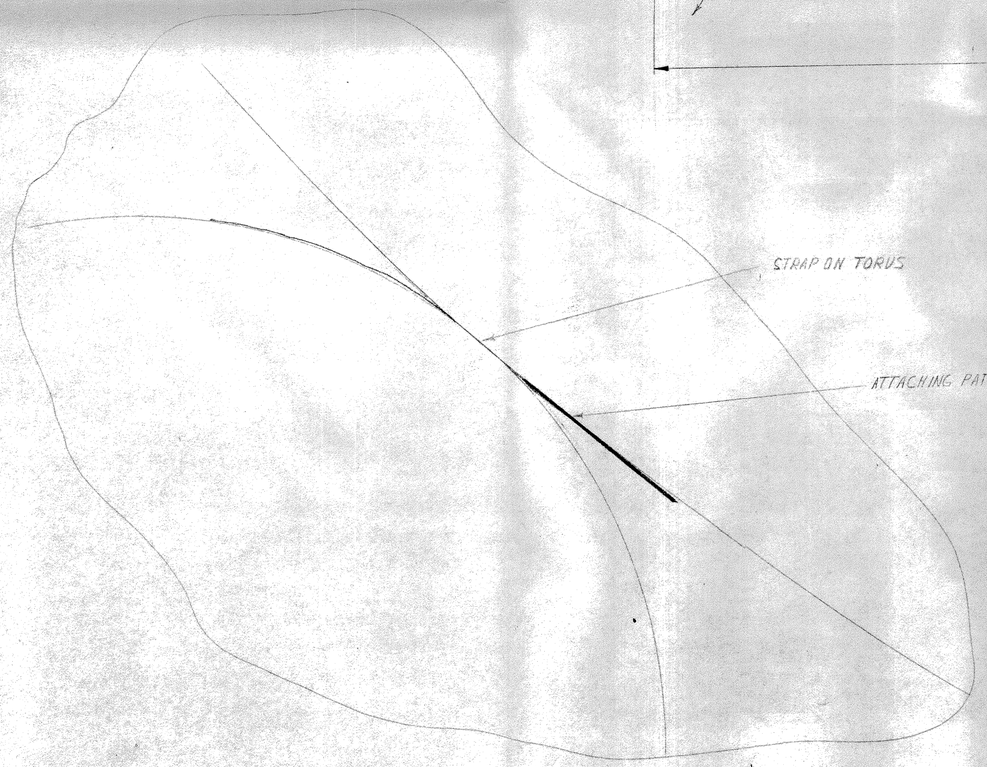
STANDARDBLUE, OMAHA 15429

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED









QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
1	LDEFI MAIN ENVELOPE		D-51628			4
2	LDEFI SKIRT		D-51627			3
2	LDEFI END PANEL		D-51630			2
2	LDEFI TORUS		D-51635			1

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°–30'
BREAK EDGES .005–.015
MATERIAL

DO NOT SCALE DRAWING

DRAWN	M. WEST	6-16-83
CHECKED		
PROJ. ENG.	M. WEST	6-16-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE
LDEFI ASSEMBLY

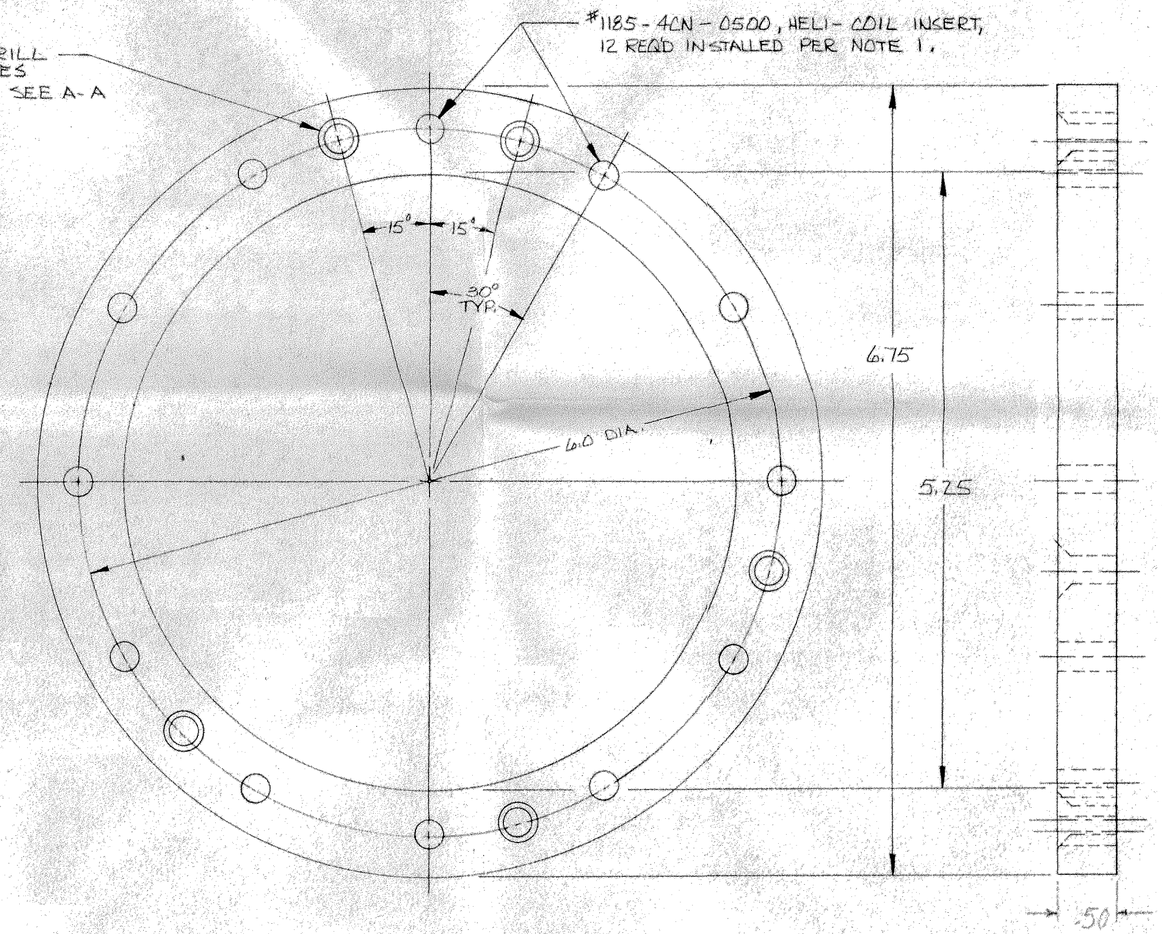
FEB 16 1984

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	51642

SCALE | WT. | SHEET

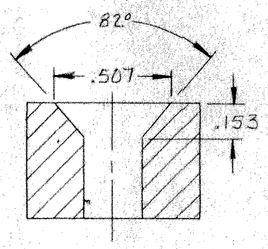
STANDARDBILT, OMAHA 87101

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



OUTER RING

NOTES: 1. DRILL 17/64 $\frac{.261}{.267}$ DIA. HOLE ON 6.00 DIA. BOLT CIRCLE, COUNTERSINK 120° x $\frac{.30}{.33}$ DIA., TAP THRU USING HELI-COIL TAP #4CPB-HZ. INSTALL INSERT USING HELI-COIL TOOL #7551-4.



SECTION "A"-"A"

FEB 1 1984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015

MATERIAL
6061 T6 ALUM.

DO NOT SCALE DRAWING

DRAWN	LLM	7-20-83
CHECKED		
PROJ. ENG.	MLW	7-22-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION		
NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

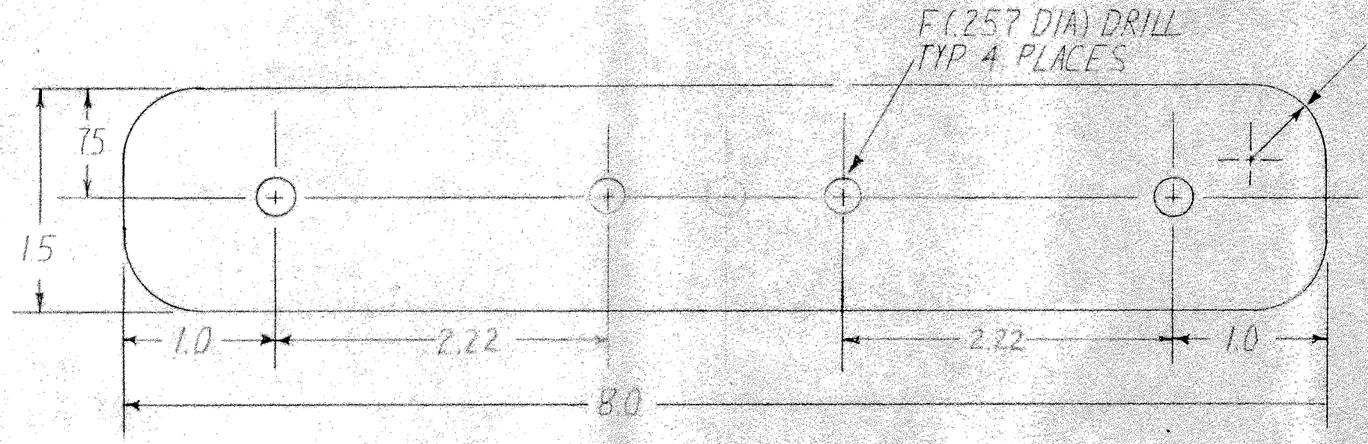
TITLE
OUTER HARD MOUNTING RING

CODE IDENT NO.	SIZE	DRAWING NO.
14979	C	C-51670

SCALE	WT.	SHEET

STANDARD BLUE, OMAHA 26627

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



BUFF ALL EDGES SMOOTH

FEB 16 1984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°–30'
BREAK EDGES .005–.015

MATERIAL AL 6061-T6 1/8"

DO NOT SCALE DRAWING

DRAWN	M WEST	8-26-83
CHECKED		
PROJ. ENG.	M WEST	8-26-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION		
NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

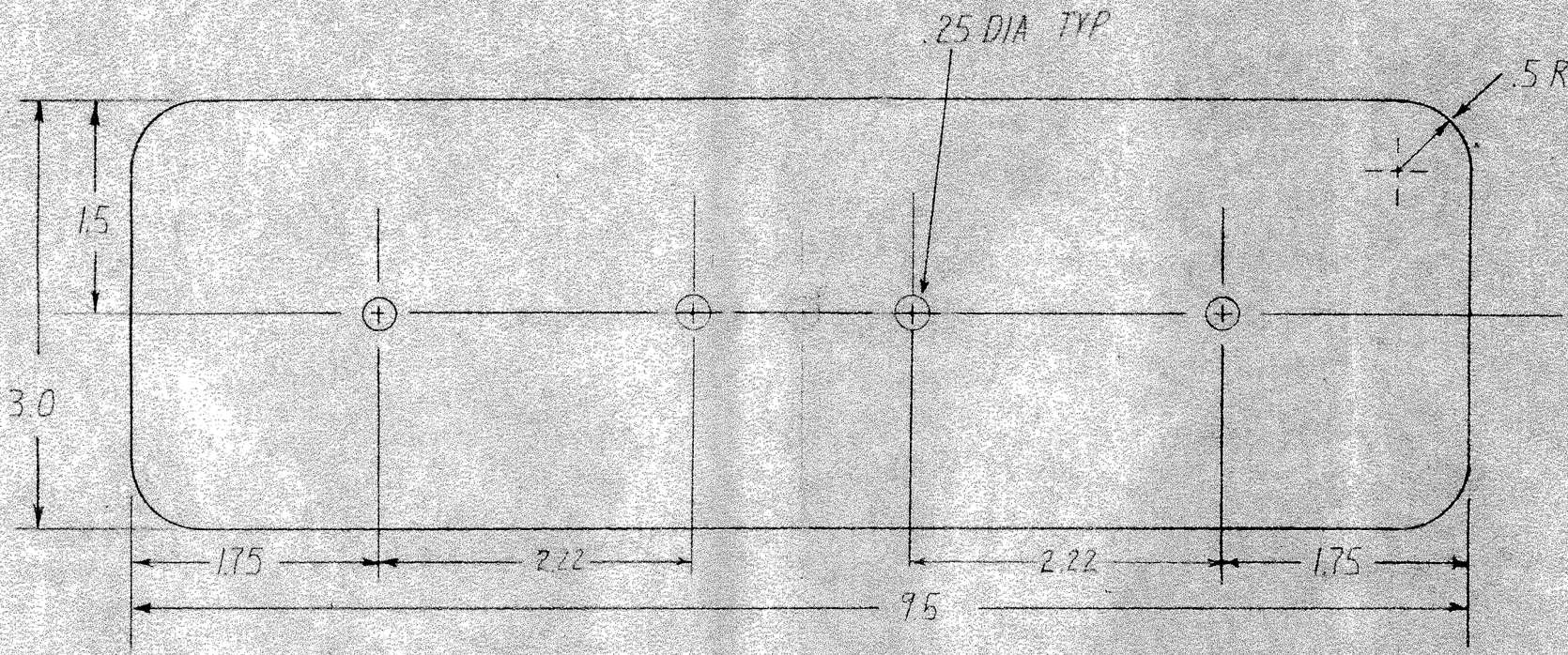
TITLE TORUS HARD MOUNT PLATE

CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	51672

SCALE	WT.	SHEET

STANDARDBLUE, OMAHA 19429

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

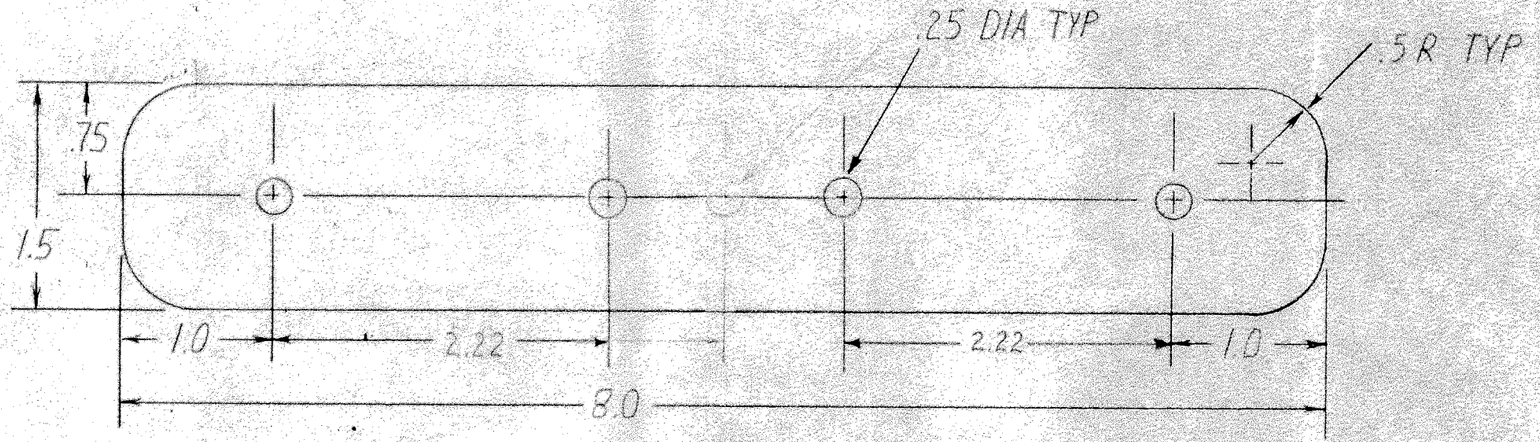


FEB 16 1984

		UNLESS OTHERWISE SPECIFIED	DRAWN	M WEST 82643	RAVEN industries, inc. SIOUX FALLS, SOUTH DAKOTA
		DIMENSIONS ARE IN INCHES TWO PLACE DECIMALS ± .03 THREE PLACE DECIMALS ± .010 FRACTIONS ± ANGLES ± 0°–30' BREAK EDGES .005–.015	CHECKED		TITLE: TORUS HARD MOUNT DOUBLER
			PROJ. ENG.	M WEST 82643	
			MFG.		
			Q. C.		
		MATERIAL: REEVES DE10391A			CODE IDENT NO. 14979 / SIZE B / DRAWING NO. 516-73
NEXT ASSY	USED ON		RELEASE FOR PRODUCTION: NO. / APPROVED / DATE		
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.		SCALE / WT. / SHEET

STANDARDBLUE, OMAHA 15428

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



FEB 161984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°–30'
BREAK EDGES .005–.015

MATERIAL .062 THK NEOPRENE 40 DUROMETER

DO NOT SCALE DRAWING

DRAWN	M WEST	8-26-83
CHECKED		
PROJ. ENG.	M WEST	8-26-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION		
NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE
TORUS HARD MOUNT GASKET

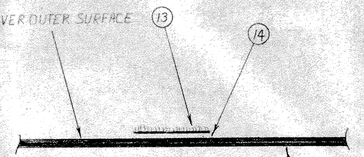
CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	51674

SCALE	WT.	SHEET

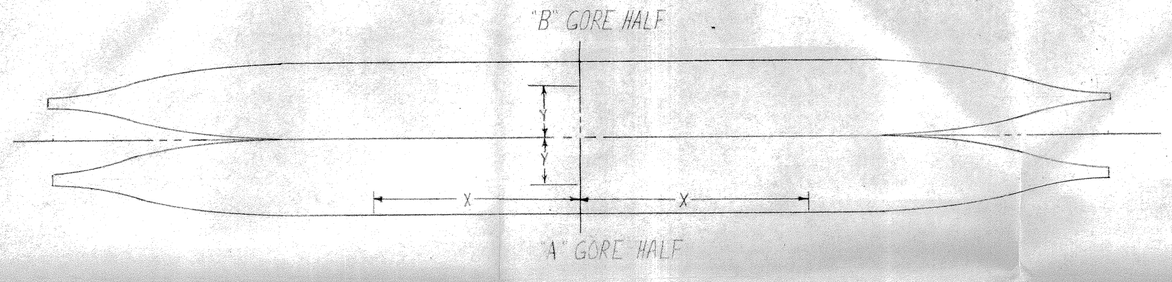
STANDARDBLUE, OMAHA 15439

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

SECTION A-A



SECTION B-B



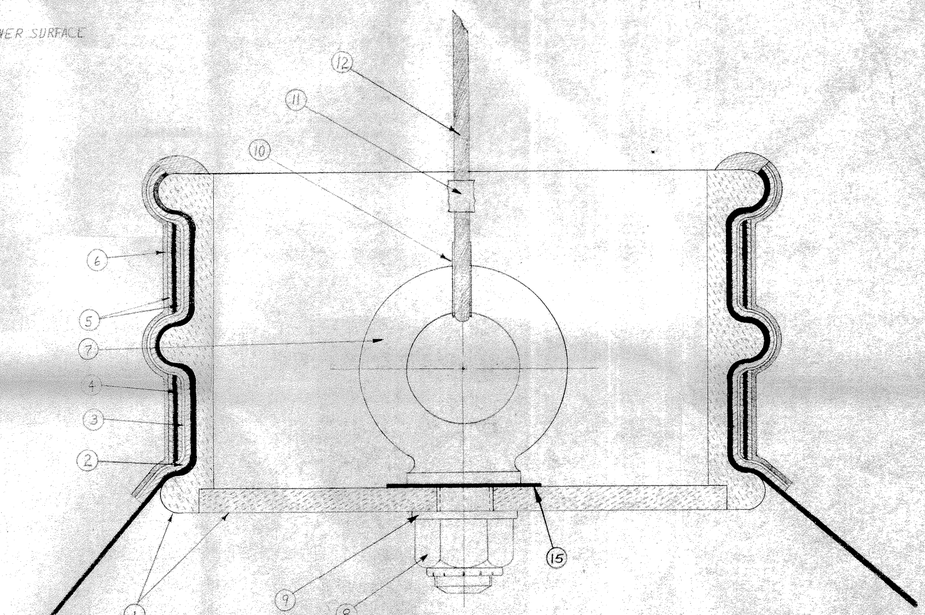
RED END BLUE END

HARDWARE MOUNTING LOCATIONS

NUMBER	TYPE OF HARDWARE	GORE NUMBER	END	GORE HALF	"X"	"Y"	DETAIL	REMARKS
1	HARD MOUNTING RINGS	5	BLUE	B	22.63	10.375	C	
2	HARD MOUNTING RINGS	8	BLUE	B	22.63	10.375	C	
3	HARD MOUNTING RINGS	5	RED	A	5.08	7.16	C	
5	HARD MOUNTING RINGS	10	RED	A	5.08	3.20	C	
7	HARD MOUNTING RINGS	1	RED	B	5.08	10.375	C	
8	HARD MOUNTING RINGS	8	RED	B	205.3	9.235	C	
9	HARD MOUNTING RINGS	6	RED	B	205.3	11.435	C	
10	HARD MOUNTING RINGS	12	RED	B	205.3	11.435	C	
11	HARD MOUNTING RINGS	2	RED	B	205.3	9.235	C	
12	HARD MOUNTING RINGS	6	BLUE	B	205.3	11.435	C	
13	HARD MOUNTING RINGS	8	BLUE	B	205.3	9.235	C	
14	HARD MOUNTING RINGS	2	BLUE	B	205.3	9.235	C	
15	HARD MOUNTING RINGS	12	BLUE	B	205.3	11.435	C	
16	MAIN INFLATION PORT	3	RED	A	217.1	10.375	B	
17	GROSS BALLAST POINT	1	RED	A	156.2	10.375	D	
18	STEM VALVE	1	BLUE	B	217.4	10.375	E	

NOTES: 1. 2" SEAL STRIP MADE FROM MAIN ENVELOPE MATL WITH WHITE TO WHITE SURFACES BONDED W/HEAT

DETAIL 'A' SPOOL



QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
1	GASKET		B-51669			15
AR	ADHESIVE				BOSTIC 157	14
AR	FASTENER TAPE 1" PYLE			MIL-F 21840D TYP II CLASS		13
1	WIRE ROPE 7x19 5/32			5600#		12
1	WIRE ROPE SLEEVE 5/32					11
1	WIRE ROPE THIMBLE 5/32					10
1	FLAT WASHER 3/4"		B-51017-23		AN 960-12L6	9
1	SELF-LOCKING NUT 3/4"		B-51015-29		41 NE-120	8
1	SHOULDER EYE BOLT		B-51019-11	5200#	G-277 3/4"x4½"	7
AR	TAPE 2" WIDE		B-51054-22		SSA-10 WHT	6
AR	TAPE 1" WIDE		B-51054-24		#890 3M	5
AR	STEEL BANDING 3/4"		B-51039-04		COMMERCIAL	4
AR	TAPE 1" WIDE		B-51054-23		#420 3M	3
AR	PLASTIC WRAPPER				POLYETHYLENE 2.3 MIL	2
1	SPOOL		C-51621			1

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

DO NOT SCALE DRAWING

DRAWN	M. WEST	5-27-83
CHECKED		
PROJ. ENG.	M. WEST	6-27-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE
LDEFI MAIN ENVELOPE

FEB 161984

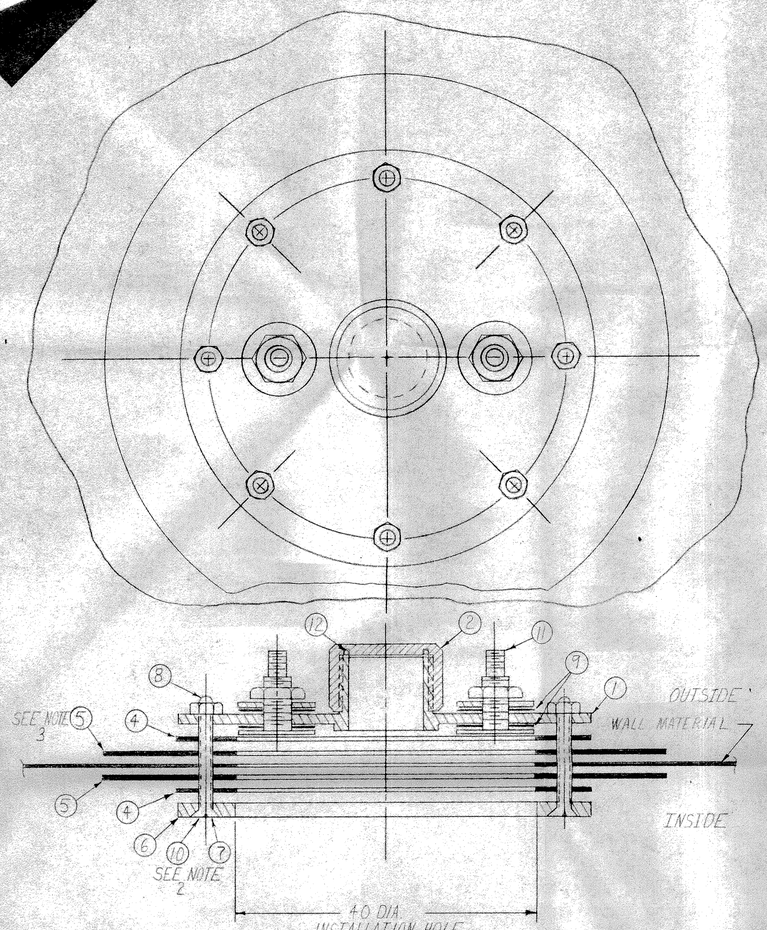
CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	51628

SCALE | WT. | SHEET 2 OF 4

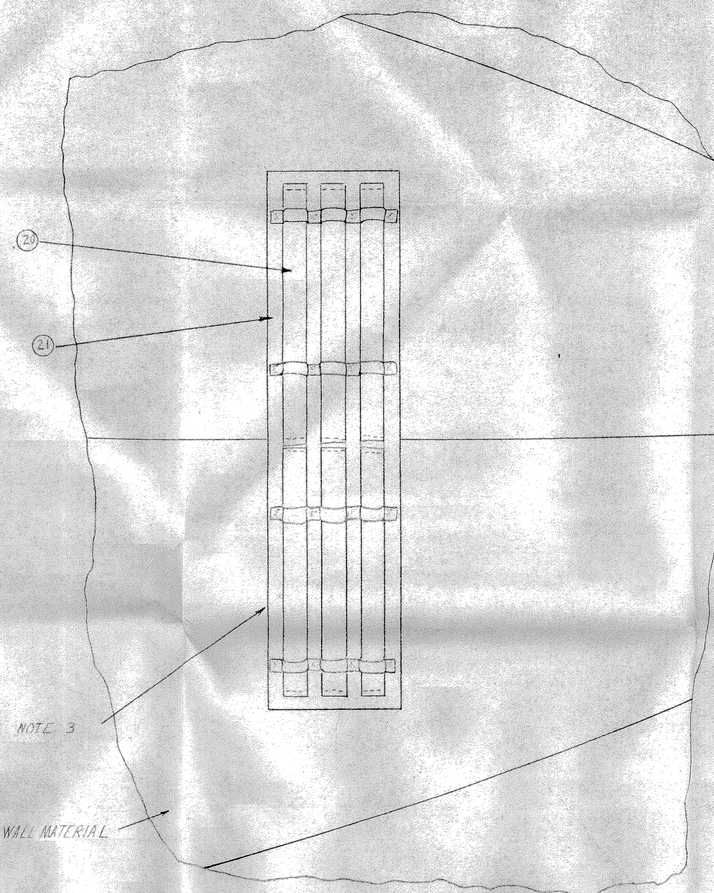
STANDARD BLUE, OMAHA 27101

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

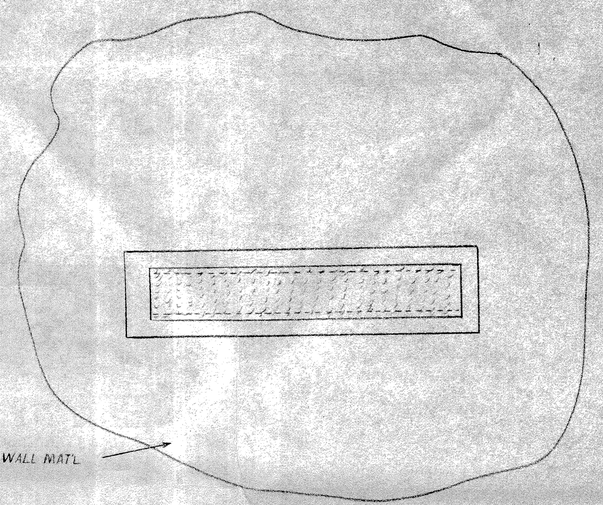
NOTES:
1. DIFFUSER, ITEM #3, IS INSERTED IN OPENING AFTER CAP IS REMOVED. FILL HOSE IS THEN SCREWED ON HOLDING DIFFUSER IN PLACE.
2. EPOXY, ITEM #10, TO SECURE SCREW HEAD FROM TURNING AND FALLING OUT.
3. ADHESIVE, ITEM #13 TO BE USED TO BOND DOUBLER TO WALL.



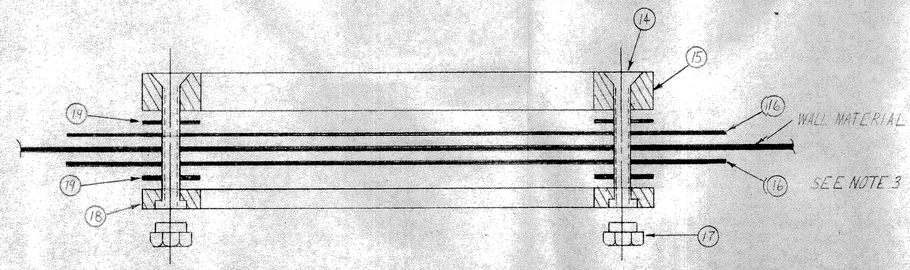
DETAIL "B" MAIN INFLATION PORT



DETAIL "D" GROSS BALLAST



DETAIL "G" TORUS MOUNTING PATCH



DETAIL "C" HARD MOUNTING POINT

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
1	GROSS BALLAST MOUNT		C-51636			21
AR	WEIGHTED TUBING		C-51637			20
2	GASKET		C-51624			19
1	INNER HARD MOUNT RING		C-51625			18
6	SPLINE NUT		51016-06			17
2	DOUBLER		C-51629			16
1	OUTER HARD MOUNT RING		C-51625			15
6	FLAT HEAD SCREWS, HEX SOCKET		1/4-20			14
AR	ADHESIVE		#7130		BOSTICK	13
1	O-RING		2-022		PARKER	12
2	TIRE VALVE					11
AR	EPOXY		EC 2216 B/A		3M	10
2	GASKET TIRE VALVE		B-14495			9
81	NUT CAP #10-32		22NKM-02			8
8	FLAT HEAD SCREW, #10-32 x 3/4		"	MS 35191-274		7
1	STUD RING		B-14494			6
2	DOUBLER		B-14493			5
2	GASKET		B-14492			4
1	DIFFUSER		B-14491		NOTE 1	3
1	CAP		B-14490			2
1	TOP PLATE WELDMENT		B-14488			1

LIST OF MATERIALS OR PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

	DRAWN	M.WEST	5-27-83
	CHECKED		
	PROJ. ENG.	M.WEST	5-27-83
	MFG.		
	Q. C.		

RELEASE FOR PRODUCTION: NO. | APPROVED | DATE

CONTR NO.

DO NOT SCALE DRAWING

NEXT ASSY | USED ON
APPLICATION

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE: LDEFI MAIN ENVELOPE

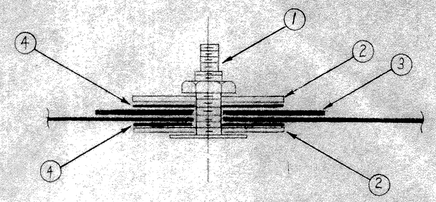
FEB 161984

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	51628

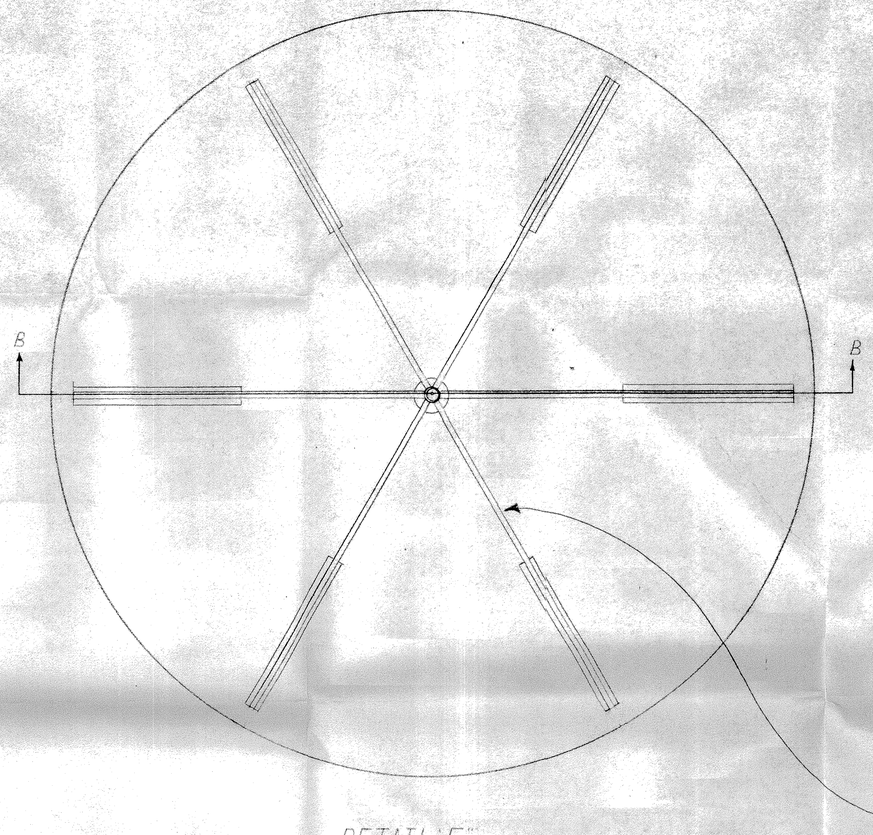
SCALE | WT. | SHEET 3 OF 4

STANDARD BLUE, OMAHA 27101

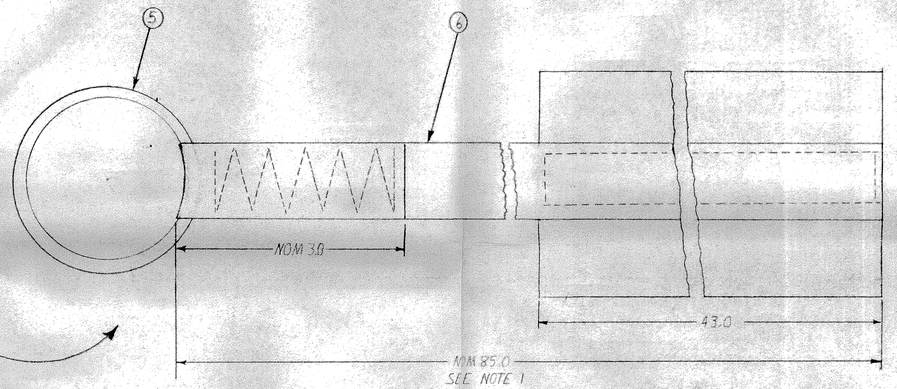
REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

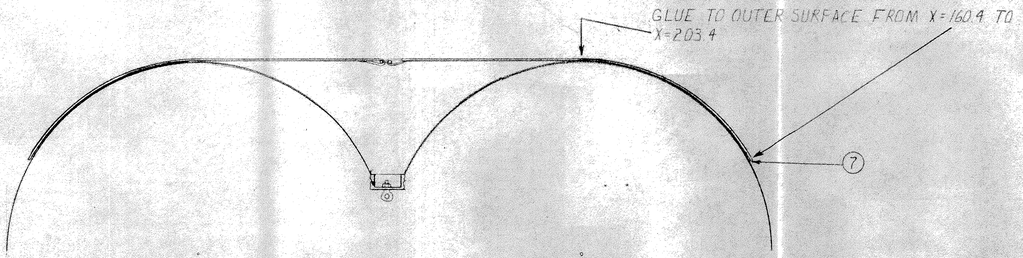


DETAIL E STEM VALVE MOUNT



DETAIL "F"
END TIE DOWN ASSEMBLY





SECTION B-B

NOTES: 1. TAPE SHOULD BE GLUED TO RESPECTIVE GORES DURING ASSEMBLY AND FITTED TO THE RING DURING AIR INFLATION. A MINIMUM OF 1 INCH SLACK SHOULD BE ALLOWED DURING FITTING BETWEEN END OF GLUEING AND RING.
2. TAPES SHOULD BE GLUED TO THE MIDDLE OF THE FOLLOWING GORES AT EACH END: 2B, 4B, 6B, 8B, 10B, 12B

FEB 161984

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
AR	ADHESIVE					7
6	TIE DOWN TAPES		MIL-T-5038-T.3 1"	700 LB. MIN. STRENGTH		6
1	TIE DOWN RING		2½"			5
2	GASKETS		B-51622			4
1	DOUBLER		B-51623		REEVES DE 10391A	3
2	LARGE DIA WASHER		B-51626			2
1	TIRE VALVE					1

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°–30'
BREAK EDGES .005–.015
MATERIAL

DO NOT SCALE DRAWING

DRAWN	M. WEST	5-27-83
CHECKED		
PROJ. ENG.	M. WEST	5-27-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

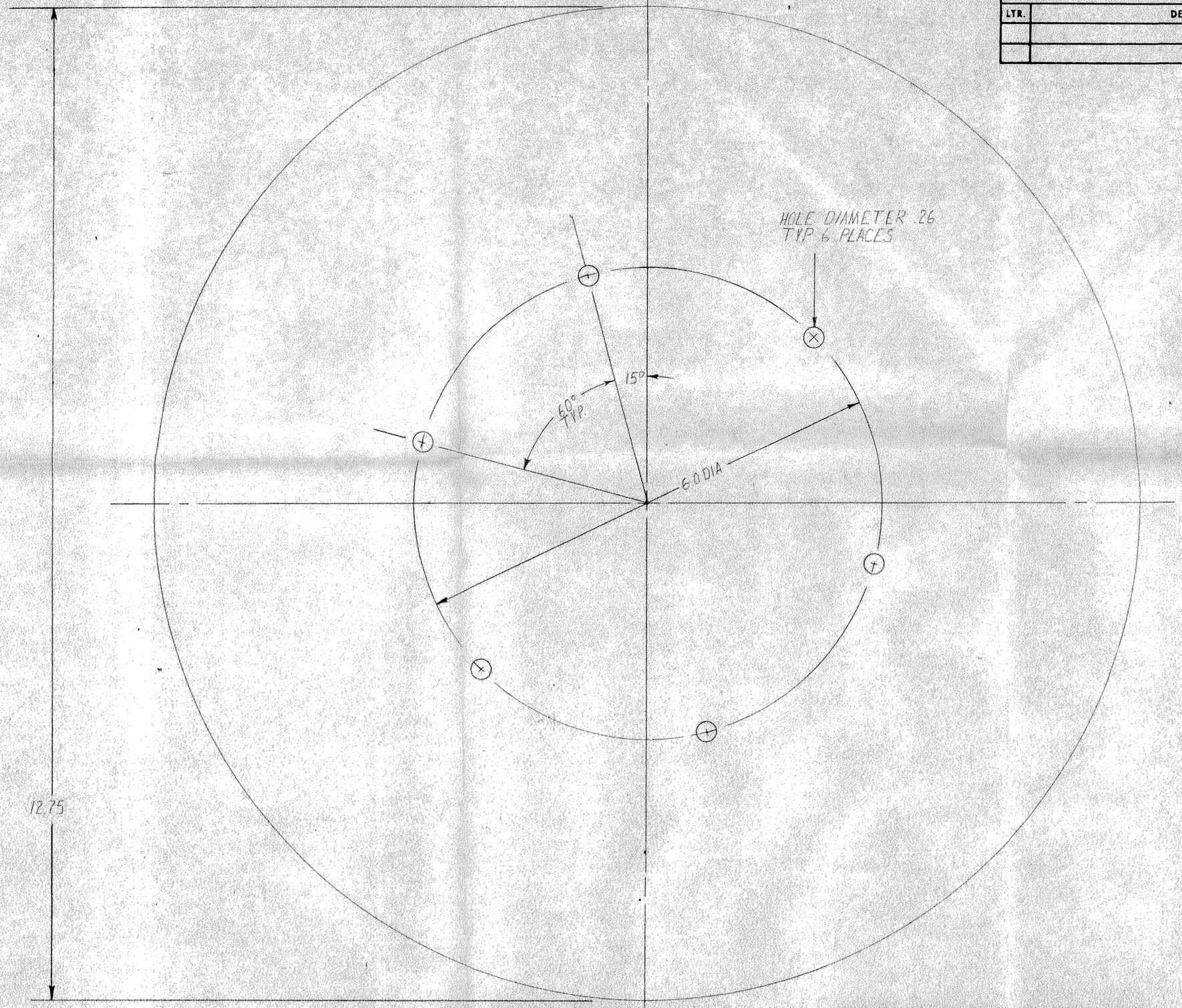
TITLE
LDEFT MAIN ENVELOPE

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	51628

SCALE | WT. | SHEET 4 OF 4

STANDARDBLUE, OMAHA 27101

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



FEB 161984

		UNLESS OTHERWISE SPECIFIED	DRAWN	M WEST	5-27-83
		DIMENSIONS ARE IN INCHES	CHECKED		
		TWO PLACE DECIMALS ± .03	PROJ. ENG.	M WEST	5-27-83
		THREE PLACE DECIMALS ± .010	MFG.		
		FRACTIONS ±	Q. C.		
		ANGLES ± 0°–30'			
		BREAK EDGES .005–.015			
		MATERIAL REEVES DE10391A			
			RELEASE FOR PRODUCTION		
			NO.	APPROVED	DATE
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.		

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE: HARD MOUNT DOUBLER

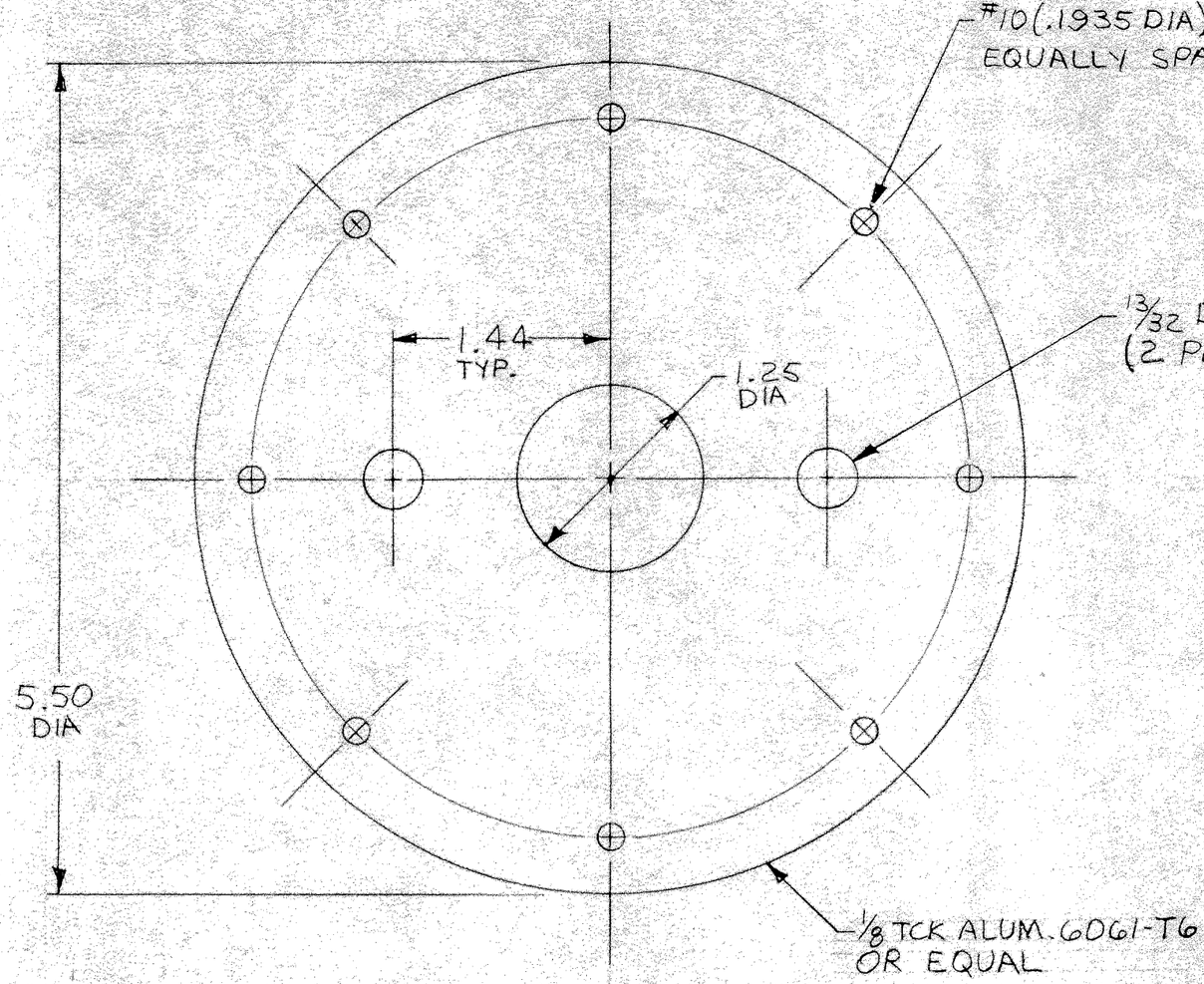
CODE IDENT NO.	SIZE	DRAWING NO.
14979	C	51629

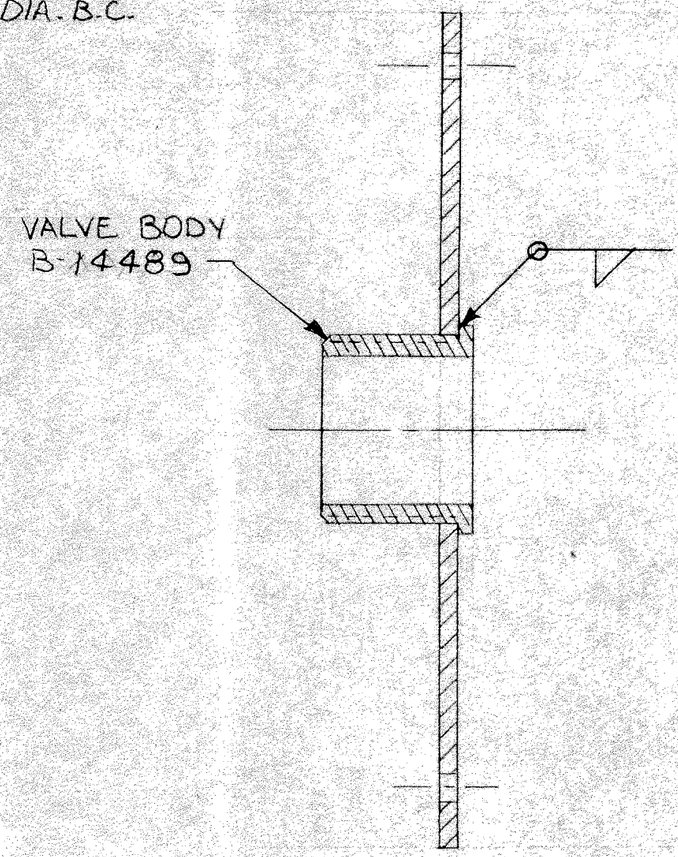
SCALE	WT.	SHEET

STANDARDBLUE, OMAHA 35527

B-14488

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED





WELDMENT

FEB 16 1984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
~~THREE PLACE DECIMALS ± .010~~
~~FRACTIONS ±~~
ANGLES ± 0°-30'
BREAK EDGES .005-.015
~~MATERIAL~~

DO NOT SCALE DRAWING

DRAWN	RUETER	1/27/84
CHECKED		
PROJ. ENG.	R.R.P.	1/26/84
MFG.		
Q. C.		

RELEASE FOR PRODUCTION		
NO.	APPROVED	DATE
	R.R.P.	1/26/84

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE TOP PLATE WELDMENT SSSP

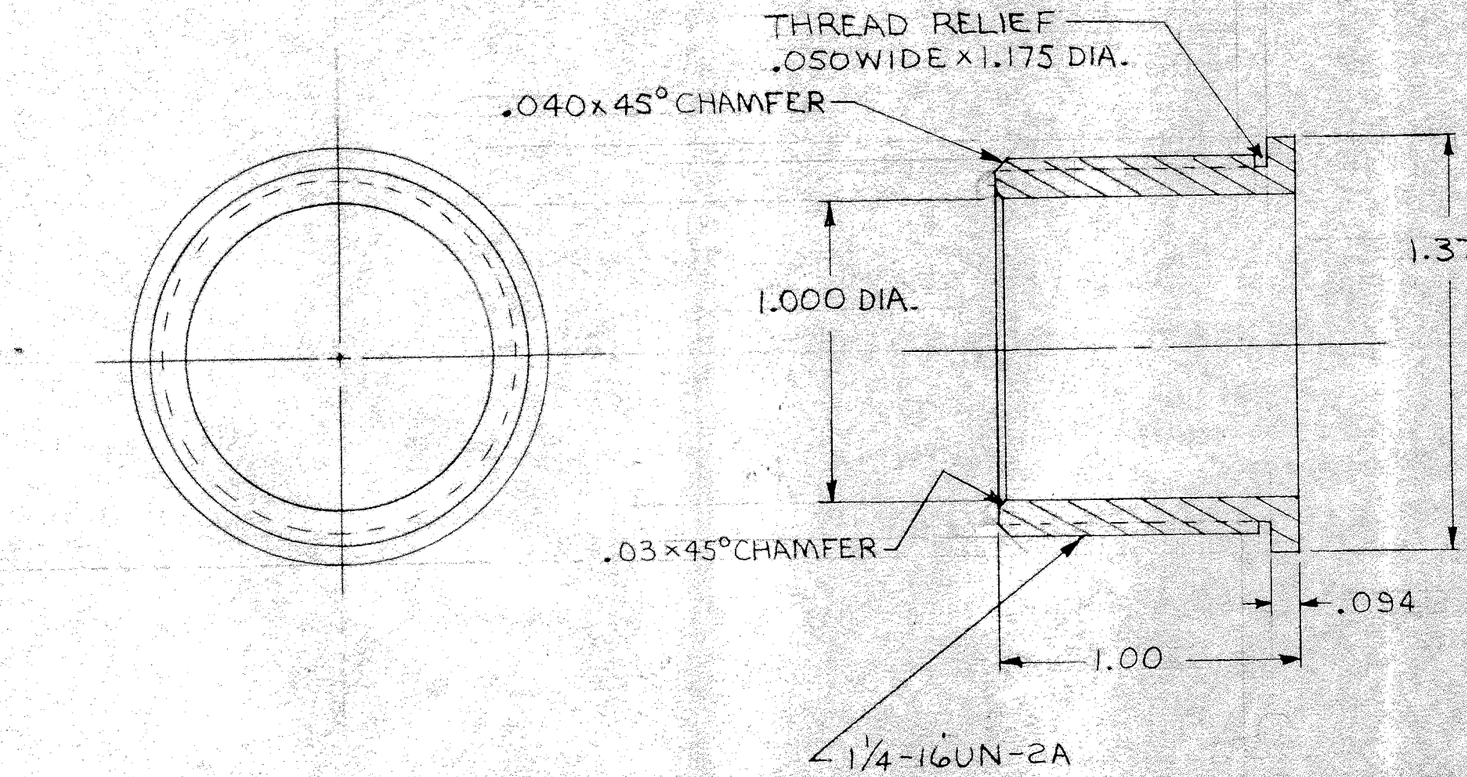
CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	B-14488

SCALE 1/1 | WT. | SHEET

STANDARD BLUE PRINT, OMAHA 091473

B-14489

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

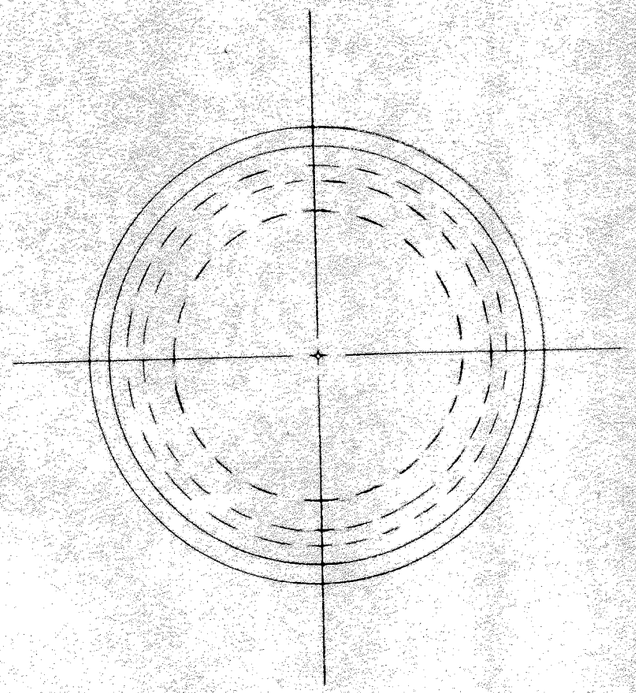


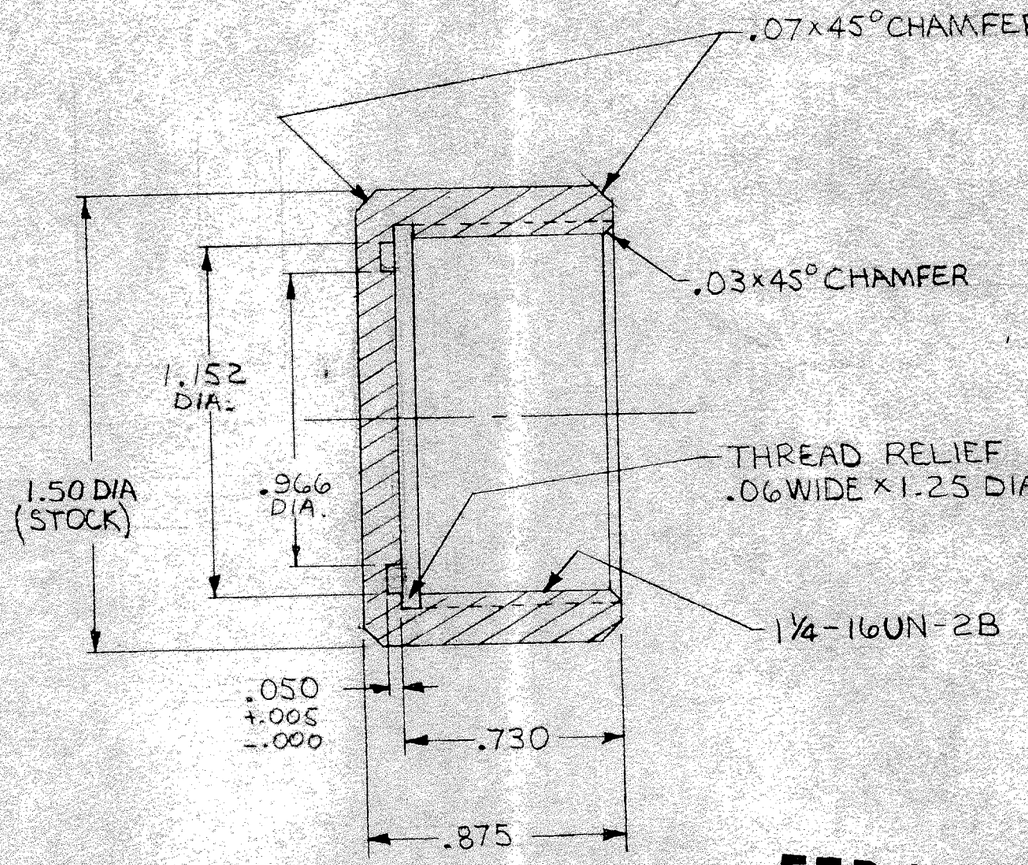
FEB 16 1984

		UNLESS OTHERWISE SPECIFIED	DRAWN	RUETER	12/15/75	RAVEN industries, inc. SIOUX FALLS, SOUTH DAKOTA	
		DIMENSIONS ARE IN INCHES	CHECKED				
		TWO PLACE DECIMALS ± .03	PROJ. ENG.	K.R.P.	2/4/76	TITLE INFLATION VALVE BODY SSSP	
		THREE PLACE DECIMALS ± .010	MFG.				
		~~FRACTIONS ±~~	Q. C.				
		ANGLES ± 0°-30'					
		BREAK EDGES .005-.015				CODE IDENT NO. 14979	SIZE B
		MATERIAL 1 3/8 O.D. ALUM BAR STOCK 6061-T6	RELEASE FOR PRODUCTION			DRAWING NO. B-14489	
		(OR EQUAL)	NO.	APPROVED	DATE		
				K.R.P.	2/4/76		
NEXT ASSY	USED ON	DO NOT SCALE DRAWING	CONTR NO.			SCALE 2/1	WT.
APPLICATION							SHEET

STANDARD BLUE PRINT, OMAHA 091473

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED





FEB 16 1984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°–30'
BREAK EDGES .005–.015

MATERIAL ½ OD. ALUM BAR STOCK: 6061-T6 (OR EQUAL)

DO NOT SCALE DRAWING

DRAWN	RUETER	3/15/76
CHECKED		
PROJ. ENG.	K.R.P.	3/4/76
MFG.		
Q. C.		

RELEASE FOR PRODUCTION		
NO.	APPROVED	DATE
	K.R.P.	3/4/76

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

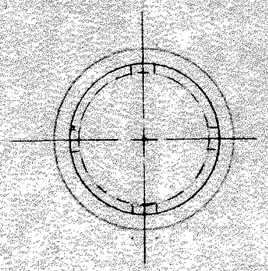
TITLE
INFLATION VALVE CAP
SSSP

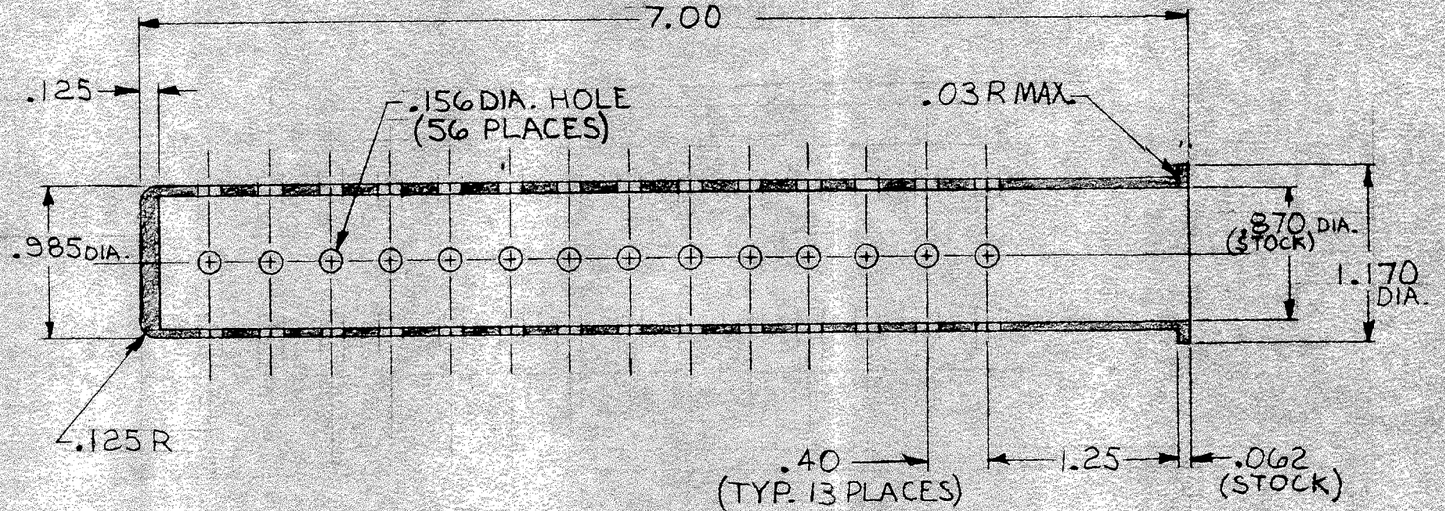
CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	B-14490

SCALE 2/1 | WT. | SHEET

STANDARD BLUE PRINT, OMAHA 091473

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED





NOTES:

1. FABRICATE FROM ALUM. TUBING WITH WELDED END PLUG & WELDED FLANGE LIP.
2. PART TO BE FREE OF SPLATTER & SHARP EDGES.

FEB 16 1984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015

MATERIAL
ALUM. 6061-T6
(OR EQUAL)

DO NOT SCALE DRAWING

DRAWN	RUETER	12/16/75
CHECKED		
PROJ. ENG.	R.R.P.	2/4/76
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE
	R.R.P.	2/4/76

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

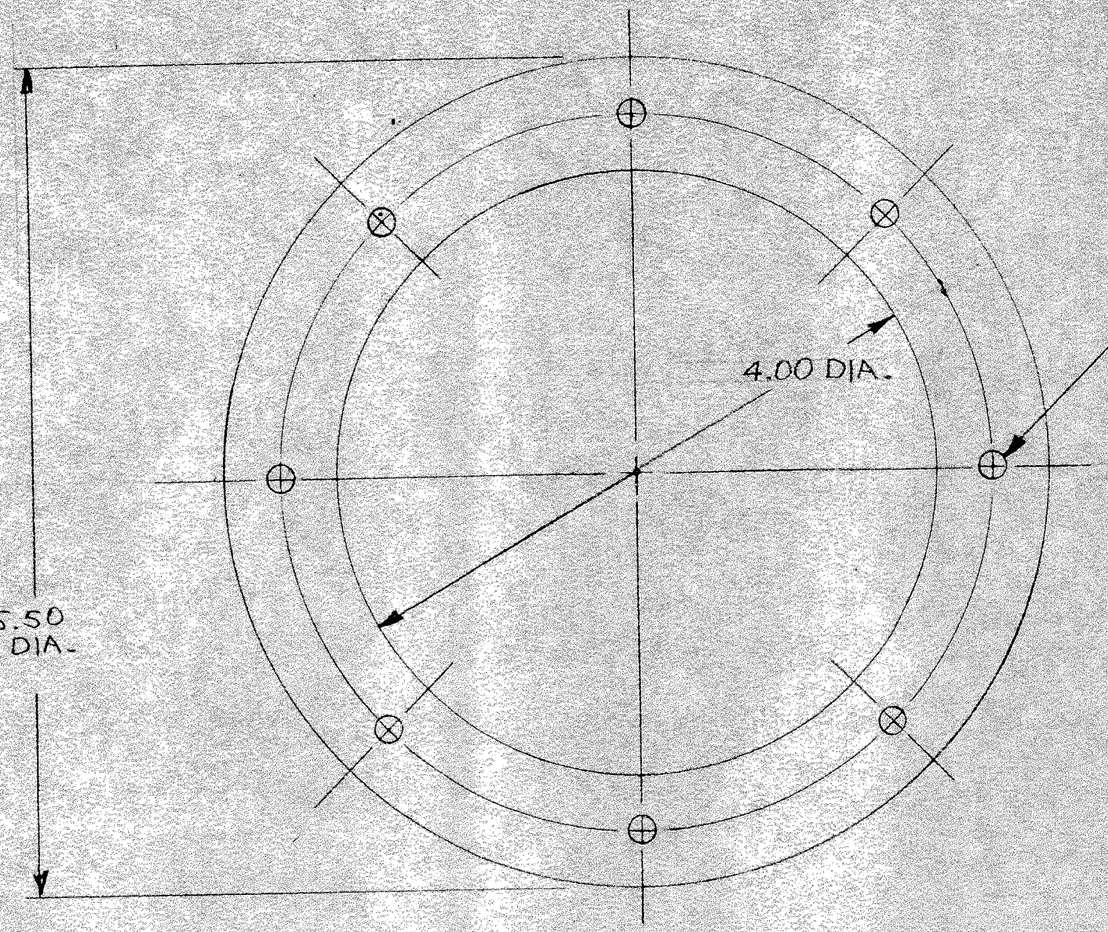
TITLE
INFLATION DIFFUSER
SSSP

CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	B-14491

SCALE 1/1 | WT. | SHEET

STANDARD BLUE PRINT, OMAHA D91495

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



FEB 16 1994

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
~~THREE PLACE DECIMALS ± .010~~
~~FRACTIONS~~ ±
ANGLES ± 0°-30'
~~BREAK EDGES .005-.015~~

MATERIAL
.062 TCK NEOPRENE
40 DUROMETER

DO NOT SCALE DRAWING

DRAWN	RLETER	3/1/96
CHECKED		
PROJ. ENG.	R.R.P.	3/4/96
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE
	R.R.P.	4/5/96

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

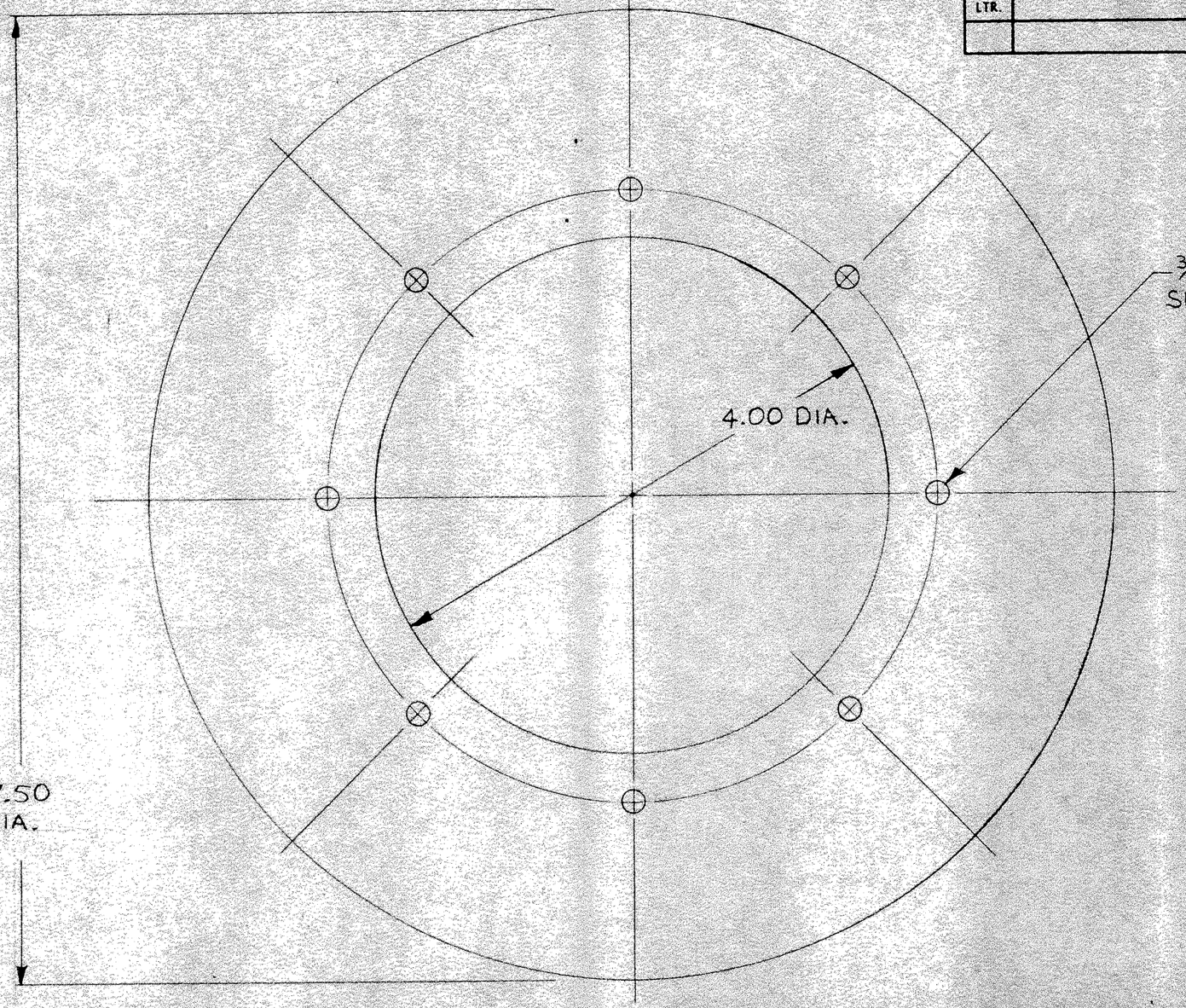
TITLE INFLATION GASKET
5SSP

CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	B-14492

SCALE 1/1	WT.	SHEET

B-14493

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



FEB 161984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
~~THREE PLACE DECIMALS ± .010~~
FRACTIONS ±
ANGLES ± 0°–30'
~~BREAK EDGES .005–.015~~

MATERIAL
RBADS 1075

DO NOT SCALE DRAWING

DRAWN	RUETER	1/22/84
CHECKED		
PROJ. ENG.	R.R.P.	1/26/84
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE
	R.R.P.	3/6/84

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE INFLATION DOUBLER SSSP

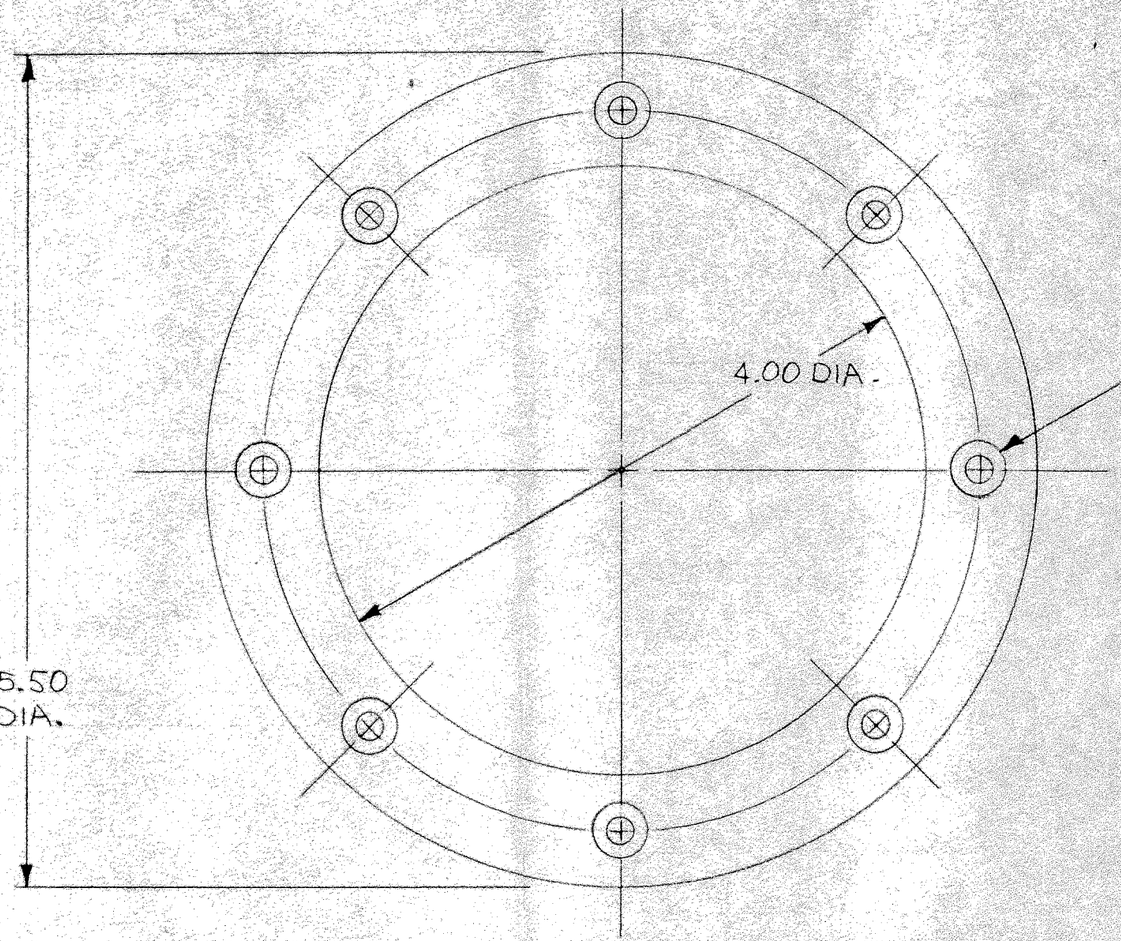
CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	B-14493

SCALE 1/1 | WT. | SHEET

STANDARD BLUE PRINT, OMAHA 081472

B-14494

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



DRILL & TAP #10-32UNF, C'SINK 82° × 3/8 DIA. 8 HOLES EQUALLY SPACED ON 4.75 DIA. B.C.

FEB 161984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°–30'
BREAK EDGES .005–.015

MATERIAL
3/16 TCK ALUM 6061-T6 OR EQUAL

DO NOT SCALE DRAWING

DRAWN	RUETER	1/22/76
CHECKED		
PROJ. ENG.	R.P.P.	2/4/76
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE
	R.P.P.	2/4/76

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE INFLATION STUD RING SSSP

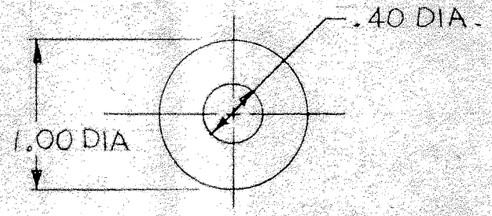
CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	B-14494

SCALE 1/1 | WT. | SHEET

STANDARD BLUE PRINT, OMAHA 091473

B-14495

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED



EEB 161984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°–30'
BREAK EDGES .005–.015

MATERIAL
.062 TCK NEOPRENE
40 DUROMETER

DO NOT SCALE DRAWING

DRAWN	RUETER	1/22/76
CHECKED		
PROJ. ENG.	R.R.P.	2/4/76
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE
	R.R.P.	2/4/76

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE
GASKET, TIRE VALVE

CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	B-14495

SCALE 1/1 | WT. | SHEET

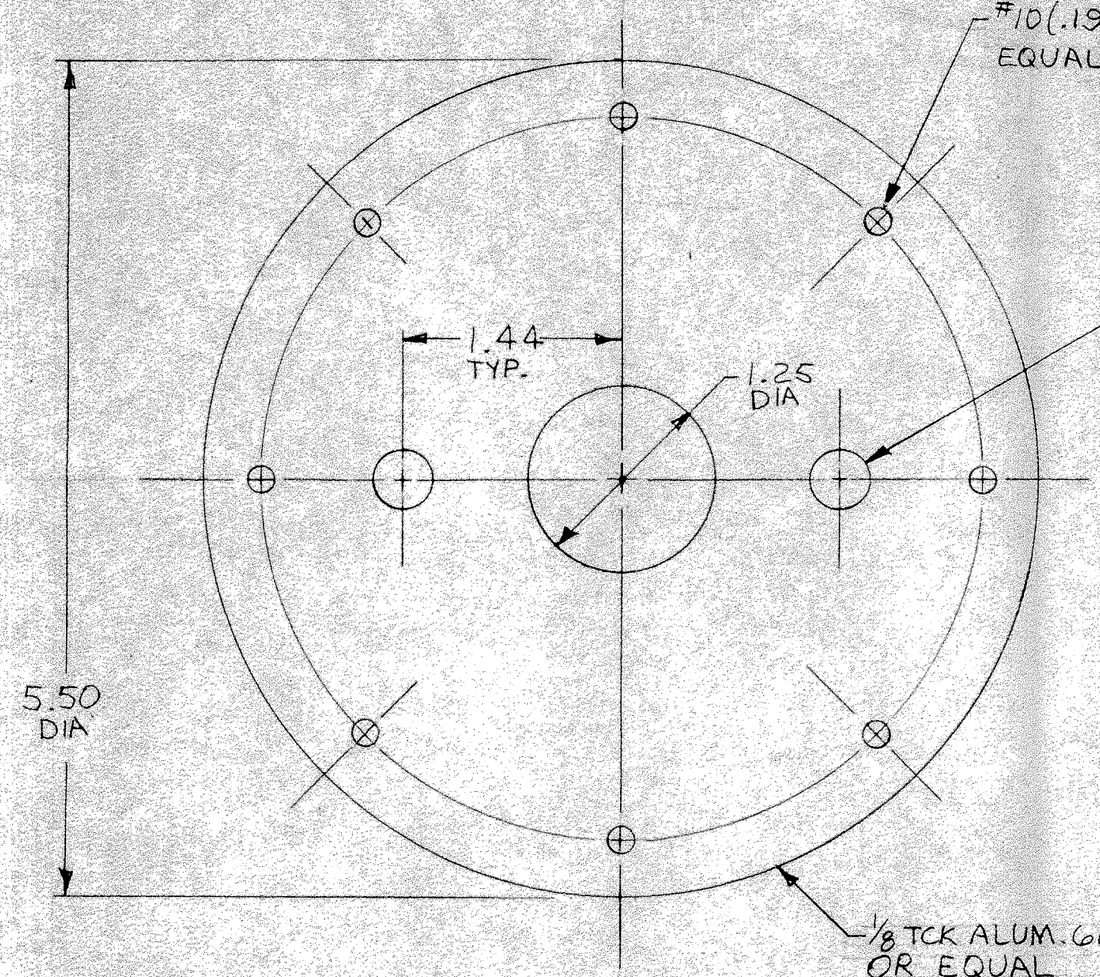
STANDARD BLUE PRINT, OMAHA 091473

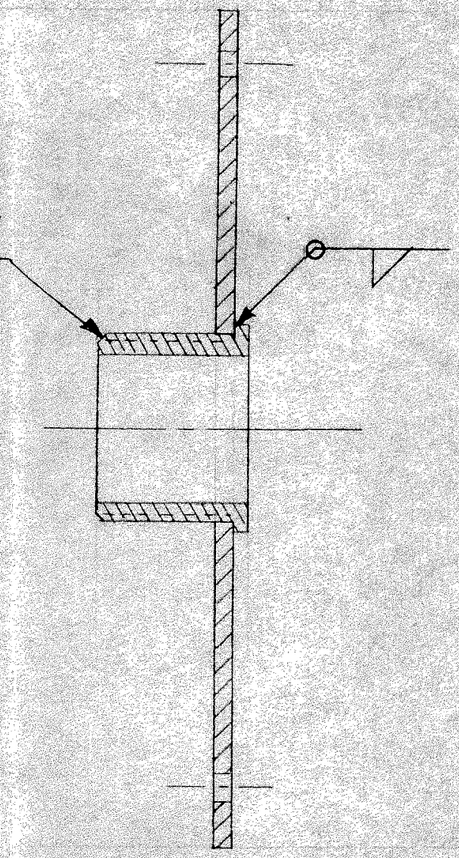
APPENDIX I

STTA Drawing Package

B-14488

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED





WELDMENT

FEB 171984

		UNLESS OTHERWISE SPECIFIED	DRAWN	RUETER	1/22/86
		DIMENSIONS ARE IN INCHES	CHECKED		
		TWO PLACE DECIMALS ± .03	PROJ. ENG.	R.R.P.	1/24/86
		~~THREE PLACE DECIMALS ± .010~~	MFG.		
		~~FRACTIONS ±~~	Q. C.		
		ANGLES ± 0°–30'			
		BREAK EDGES .005–.015	RELEASE FOR PRODUCTION		
		~~MATERIAL~~	NO.	APPROVED	DATE
NEXT ASSY	USED ON			R.R.P.	2/4/86
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.		

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

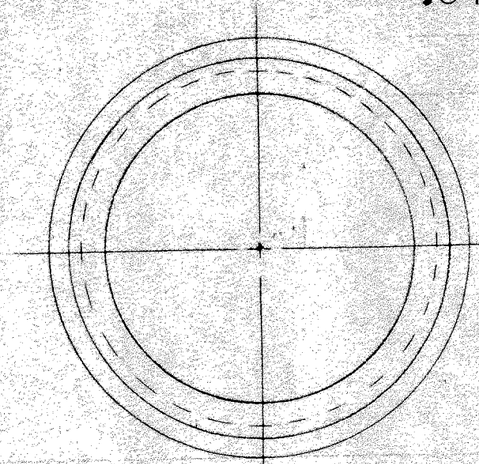
TITLE TOP PLATE WELDMENT SSSP

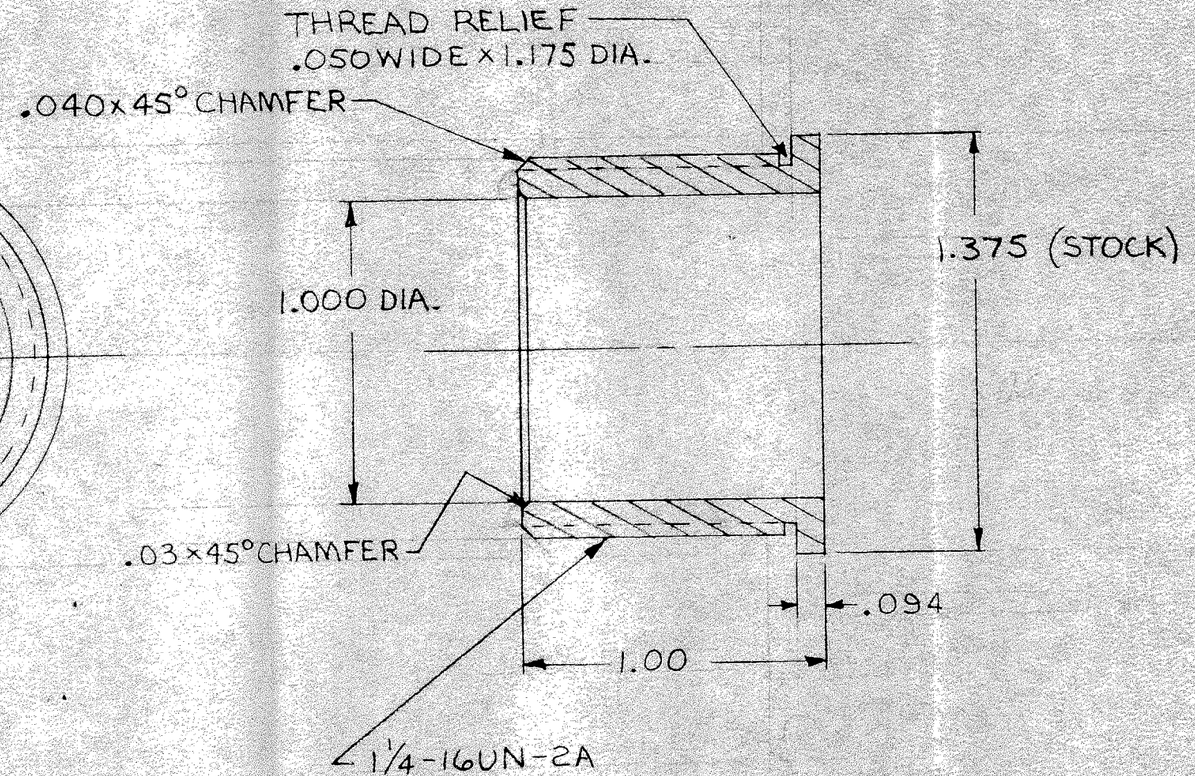
CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	B-14488

SCALE 1/1 | WT. | SHEET

STANDARD BLUE PRINT, OMAHA 091473

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED





FEB 171984

		UNLESS OTHERWISE SPECIFIED	DRAWN	RUETER	12/15/75
		DIMENSIONS ARE IN INCHES	CHECKED		
		TWO PLACE DECIMALS ± .03	PROJ. ENG.	R.R.P.	2/4/76
		THREE PLACE DECIMALS ± .010	MFG.		
		~~FRACTIONS ±~~	Q. C.		
		ANGLES ± 0°–30'			
		BREAK EDGES .005–.015	RELEASE FOR PRODUCTION		
		MATERIAL 1 3/8 O.D. ALUM BAR STOCK 6061-T6	NO.	APPROVED	DATE
		(OR EQUAL)		R.R.P.	2/4/76
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.		

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE INFLATION VALVE BODY SSSP

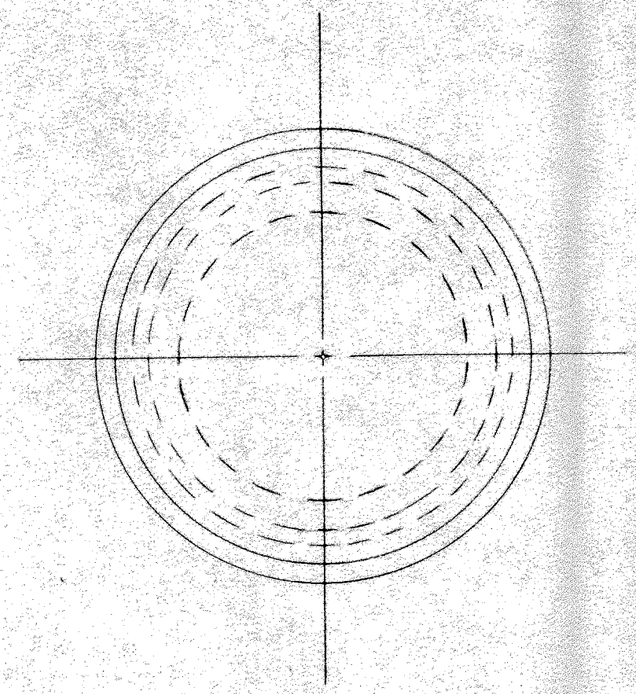
CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	B-14489
SCALE 2/1	WT.	SHEET

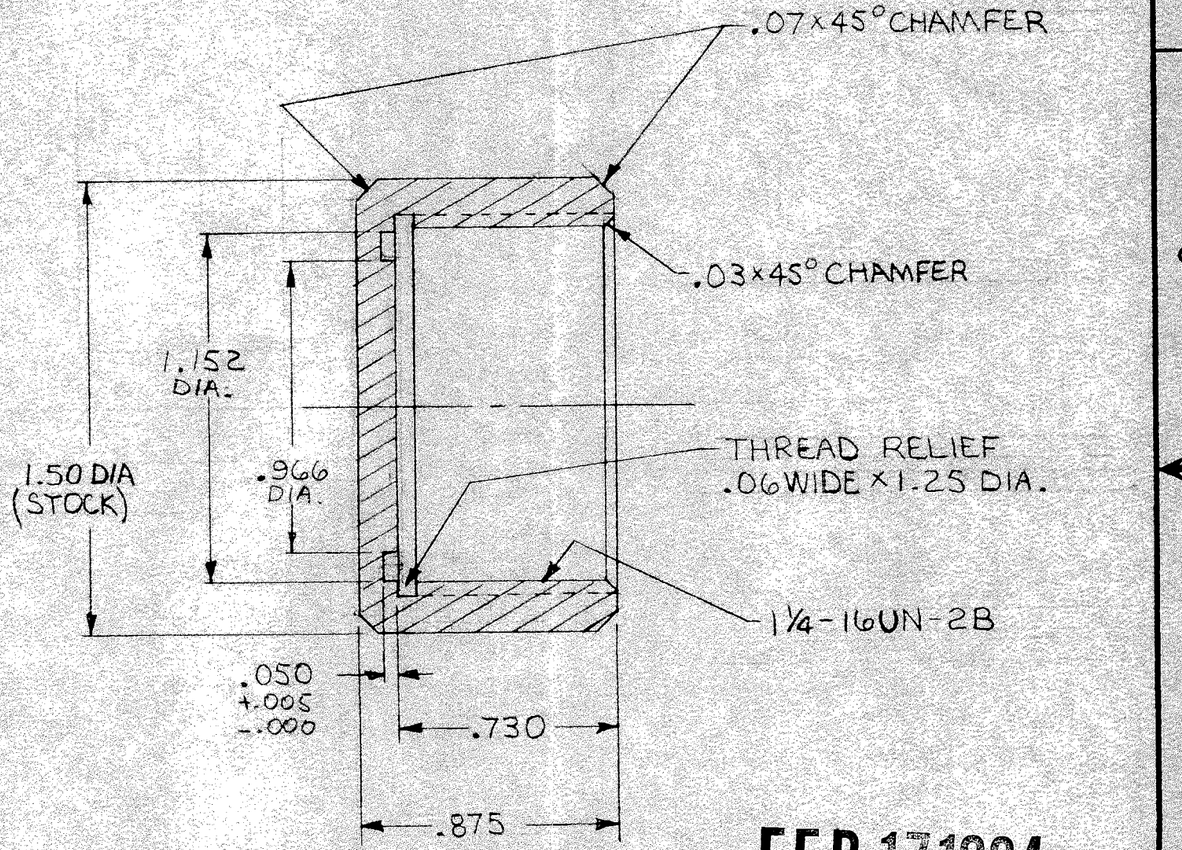
STANDARD BLUE PRINT, OMAHA 091473

5 4 3 2 1

B-14490

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED





FEB 171984

		UNLESS OTHERWISE SPECIFIED	DRAWN	RUETER	12/5/75
		DIMENSIONS ARE IN INCHES	CHECKED		
		TWO PLACE DECIMALS ± .03	PROJ. ENG.	R.R.P.	3/4/76
		THREE PLACE DECIMALS ± .010	MFG.		
		FRACTIONS ±	Q. C.		
		ANGLES ± 0°-30'			
		BREAK EDGES .005-.015	RELEASE FOR PRODUCTION		
		MATERIAL 1½ OD. ALUM BAR STOCK: 6061-T6 (OR EQUAL)	NO.	APPROVED	DATE
				R.R.P.	3/4/76
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.		

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE
INFLATION VALVE CAP
SSSP

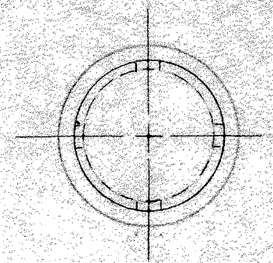
CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	B-14490

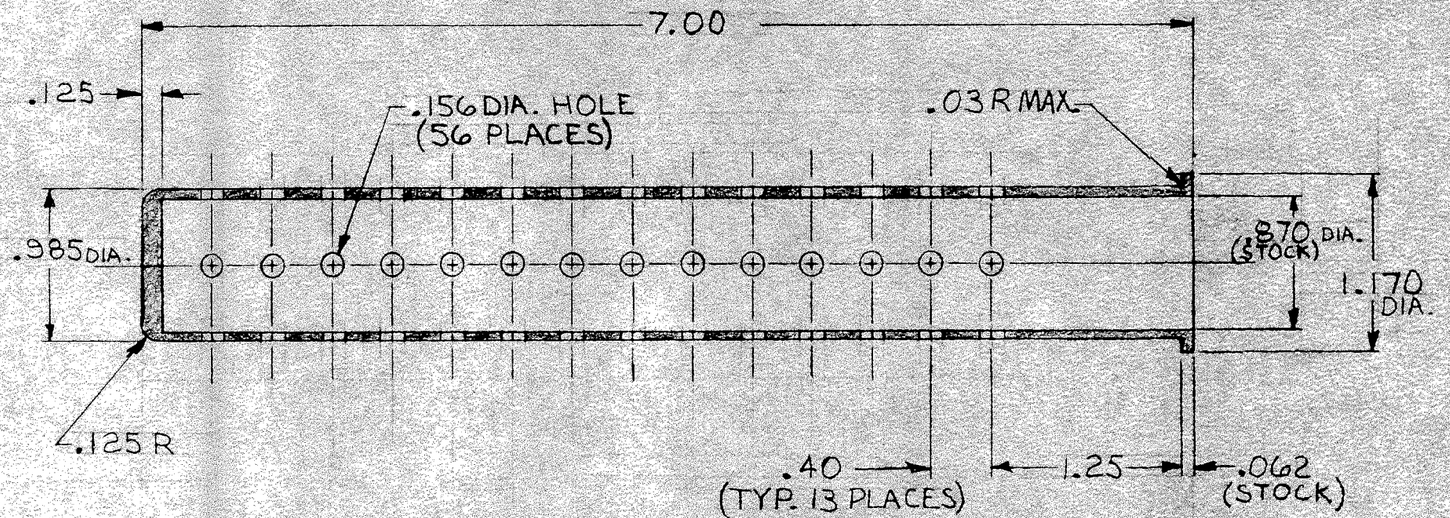
SCALE 2/1 | WT. | SHEET

STANDARD BLUE PRINT, OMAHA 68147

B-14491

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED





NOTES:

1. FABRICATE FROM ALUM. TUBING WITH WELDED END PLUG & WELDED FLANGE LIP.
2. PART TO BE FREE OF SPLATTER & SHARP EDGES.

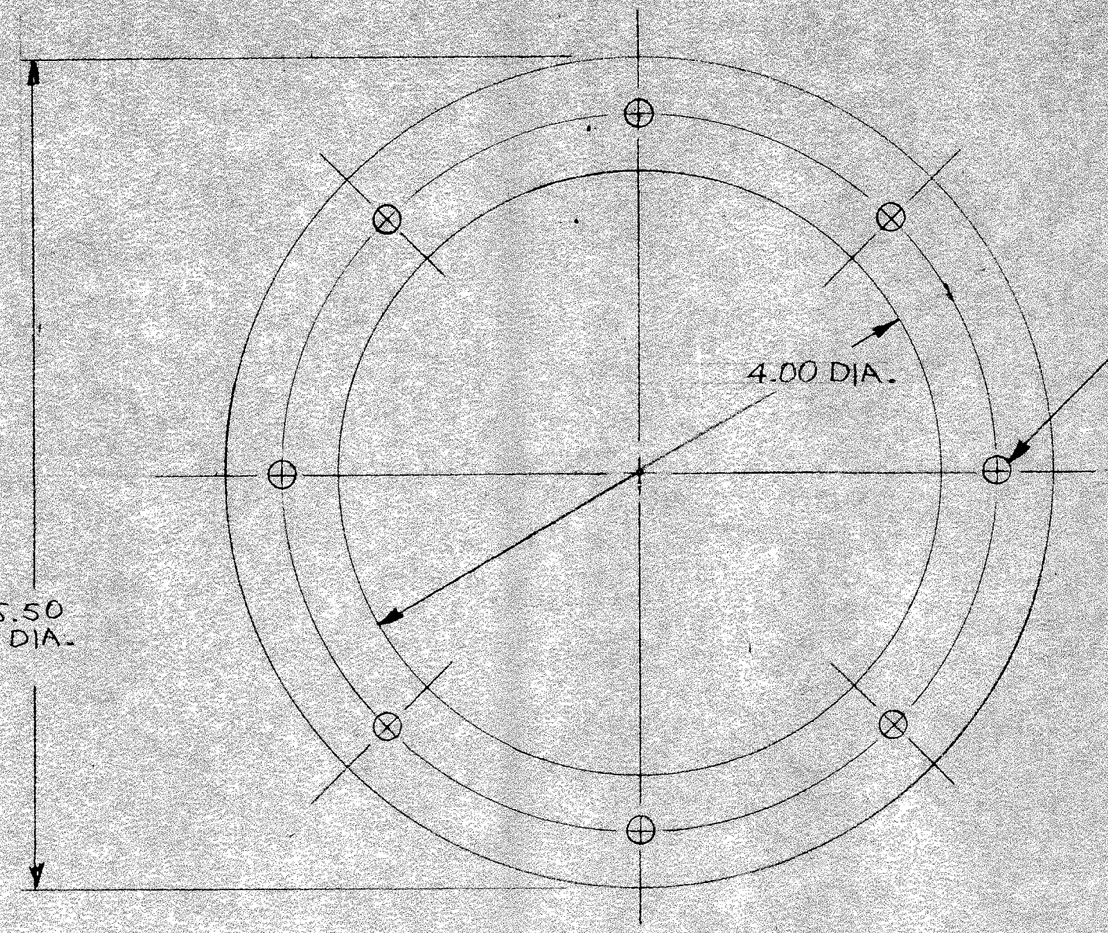
FEB 171984

		UNLESS OTHERWISE SPECIFIED	DRAWN	RUETER	1/16/75	RAVEN industries, inc. SIOUX FALLS, SOUTH DAKOTA	
		DIMENSIONS ARE IN INCHES TWO PLACE DECIMALS ± .03 THREE PLACE DECIMALS ± .010 FRACTIONS ± ANGLES ± 0°–30' BREAK EDGES .005–.015	CHECKED			TITLE INFLATION DIFFUSER SSSP	
			PROJ. ENG.	R.R.P.	3/4/76		
			MFG.				
			Q. C.				
		MATERIAL ALUM. 6061-T6 (OR EQUAL)	RELEASE FOR PRODUCTION			CODE IDENT NO. 14979	SIZE B	DRAWING NO. B-14491
			NO.	APPROVED	DATE		
NEXT ASSY	USED ON			R.R.P.	3/4/76		
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.			SCALE 1/1	WT.	SHEET

STANDARD BLUE PRINT, OMAHA DS1473

B-14492

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



FEB 17 1984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
~~THREE PLACE DECIMALS ± .010~~
FRACTIONS ±
ANGLES ± 0°-30'
~~BREAK EDGES .005 - .015~~

MATERIAL
.062 TCK NEOPRENE
40 DUROMETER

DO NOT SCALE DRAWING

DRAWN	RLETER	3/1/76
CHECKED		
PROJ. ENG.	R.R.P.	3/4/76
MFG.		
Q. C.		

RELEASE FOR PRODUCTION		
NO.	APPROVED	DATE
1	R.R.P.	4/4/76

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE INFLATION GASKET
SSSP

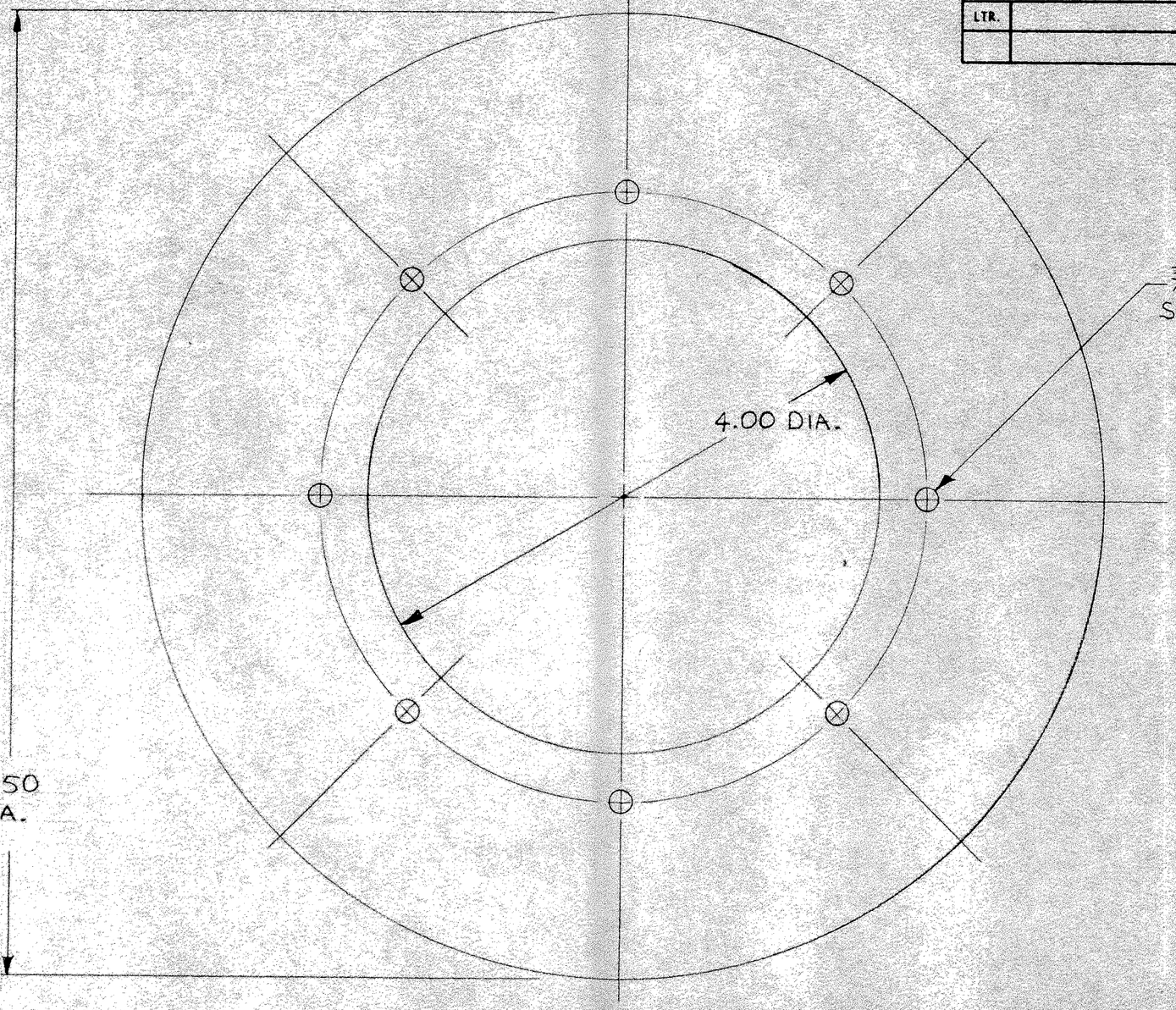
CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	B-14492

SCALE 1/1 | WT. | SHEET

STANDARD BLUE PRINT, OMAHA 691473

B-14493

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



FEB 17 1984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
~~THREE PLACE DECIMALS ± .010~~
~~FRACTIONS ±~~
ANGLES ± 0°-30'
~~BREAK EDGES .005-.015~~

MATERIAL
RBADS 1075

DO NOT SCALE DRAWING

DRAWN	PUETER	1/22/84
CHECKED		
PROJ. ENG.	R.R.P.	1/4/84
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE
	L.K.S.	1/4/84

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE INFLATION DOUBLER SSSP

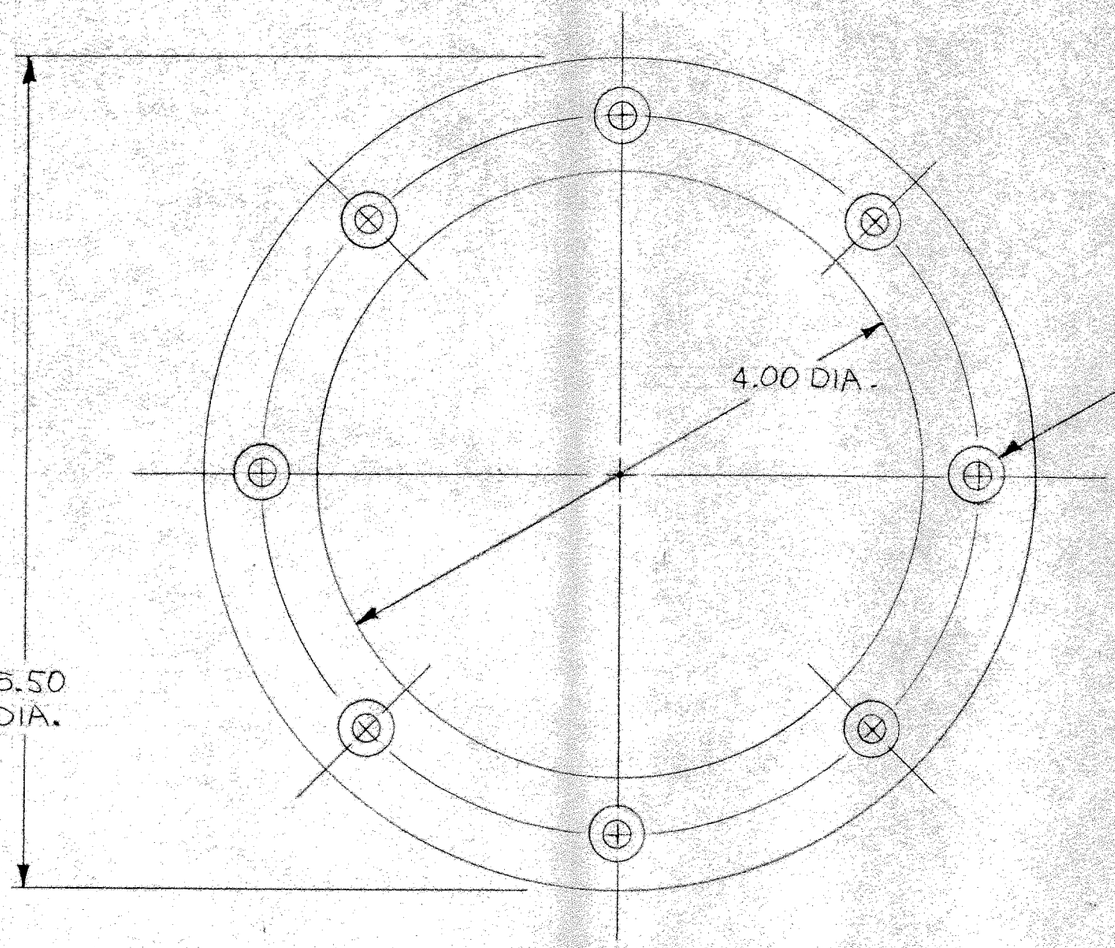
CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	B-14493

SCALE 1/1 | WT. | SHEET

STANDARD BLUE PRINT, OMAHA 091473

5 | 4 | 3 | B-14494 | 2 | 1

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



DRILL & TAP #10-32UNF, C'SINK 82° x 3/8 DIA. 8 HOLES EQUALLY SPACED ON 4.75 DIA. B.C.

FEB 17 1984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015

MATERIAL
3/16 TCK ALUM 6061-T6 OR EQUAL

DO NOT SCALE DRAWING

DRAWN	RUETER	1/22/14
CHECKED		
PROJ. ENG.	R.R.P.	2/4/14
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE
	R.R.P.	2/4/14

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE INFLATION STUD RING SSSP

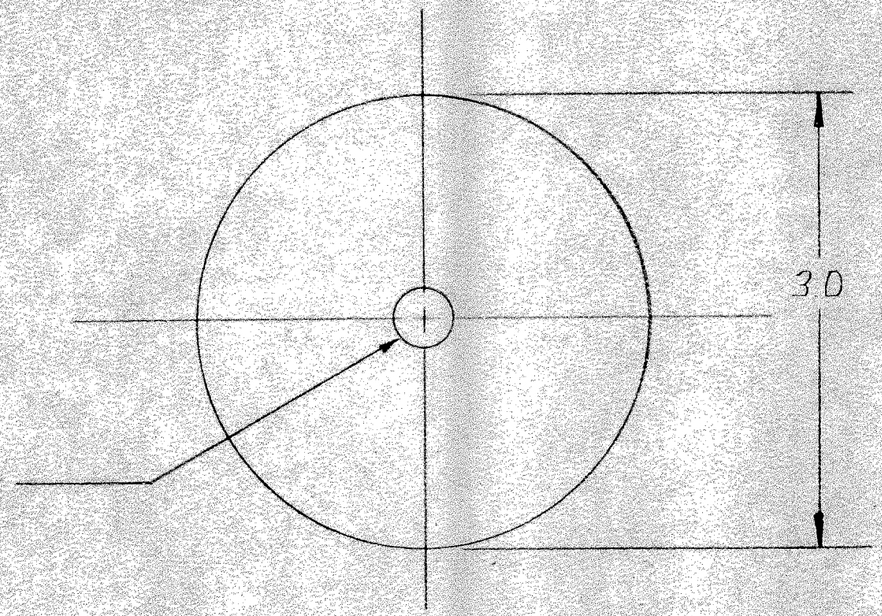
CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	B-14494

SCALE 1/1 | WT. | SHEET

STANDARD BLUE PRINT, OMAHA 091473

5 | 4 | 3 | 2 | 1

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



FEB 17 1984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015

MATERIAL

REEVES DE1039IA

DO NOT SCALE DRAWING

DRAWN	M WEST 5-27-83	
CHECKED		
PROJ. ENG.	M WEST 5-27-83	
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

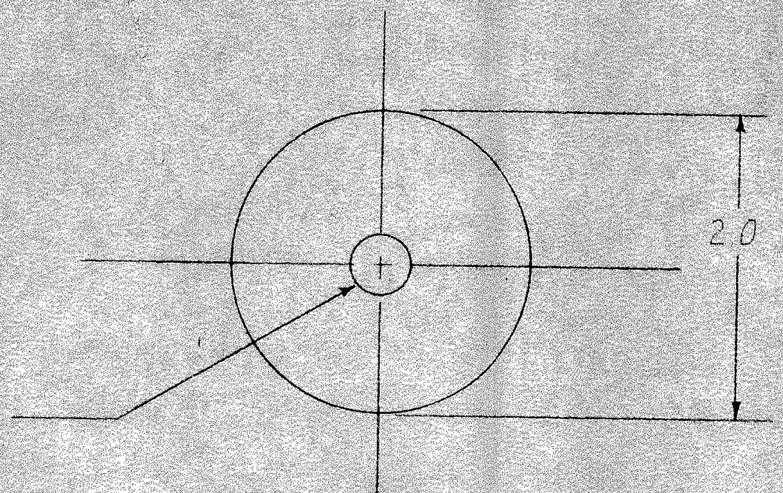
TITLE
TIRE VALVE DOUBLER

CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	51623

SCALE	WT.	SHEET

STANDARDBLUE, OMAHA 15429

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



HOLE .406 DIA

FEB 17 1984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015

MATERIAL .062 THK NEOPRENE 40 DUROMETER

DO NOT SCALE DRAWING

DRAWN	M WEST	2/7/83
CHECKED		
PROJ. ENG.	M WEST	2/7/83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION		
NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

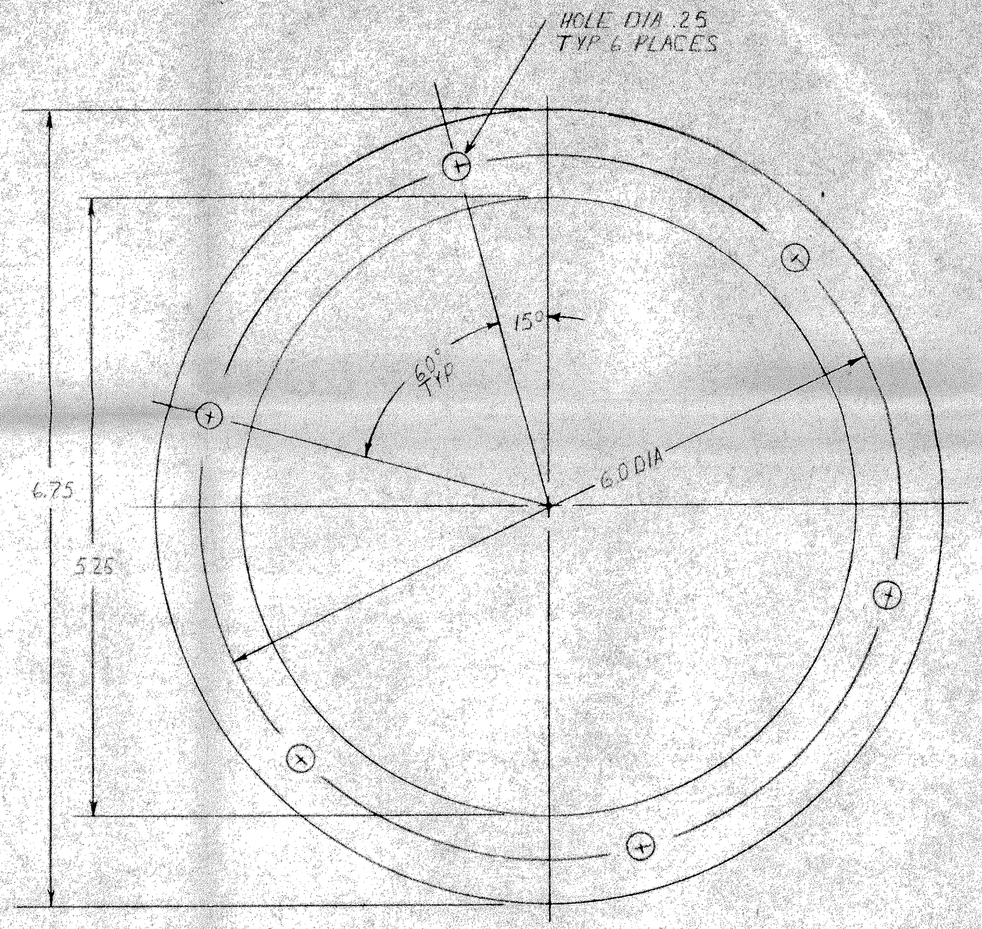
TITLE TIRE VALVE GASKET

CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	51622

SCALE	WT.	SHEET

STANDARDBLUE, SMANA 12489

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



FEB 171984

		UNLESS OTHERWISE SPECIFIED	DRAWN	M WEST	5-27-83
		DIMENSIONS ARE IN INCHES	CHECKED		
		TWO PLACE DECIMALS ± .03	PROJ. ENG.	M WEST	5-27-83
		THREE PLACE DECIMALS ± .010	MFG.		
		FRACTIONS ±	Q. C.		
		ANGLES ± 0°–30'			
		BREAK EDGES .005–.015			
		MATERIAL .062 THICK NEOPRENE 40 DUROMETER			
			RELEASE FOR PRODUCTION		
			NO.	APPROVED	DATE
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.		

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

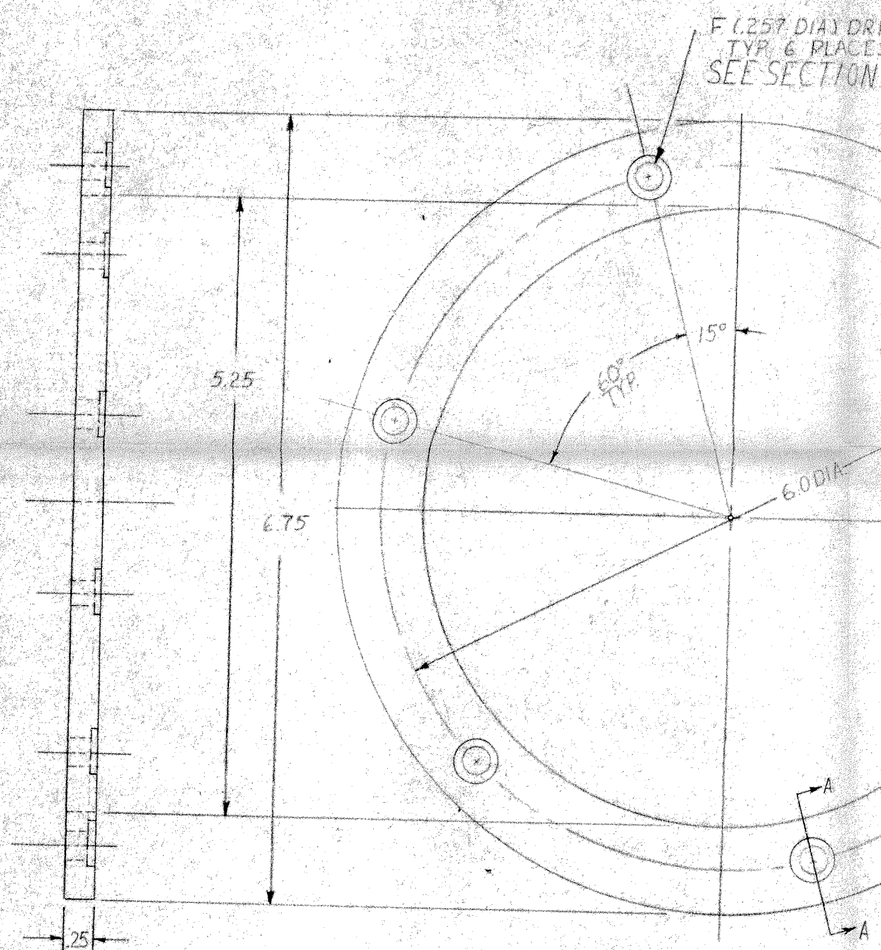
TITLE HARD MOUNT GASKET

CODE IDENT NO.	SIZE	DRAWING NO.
14979	C	51624

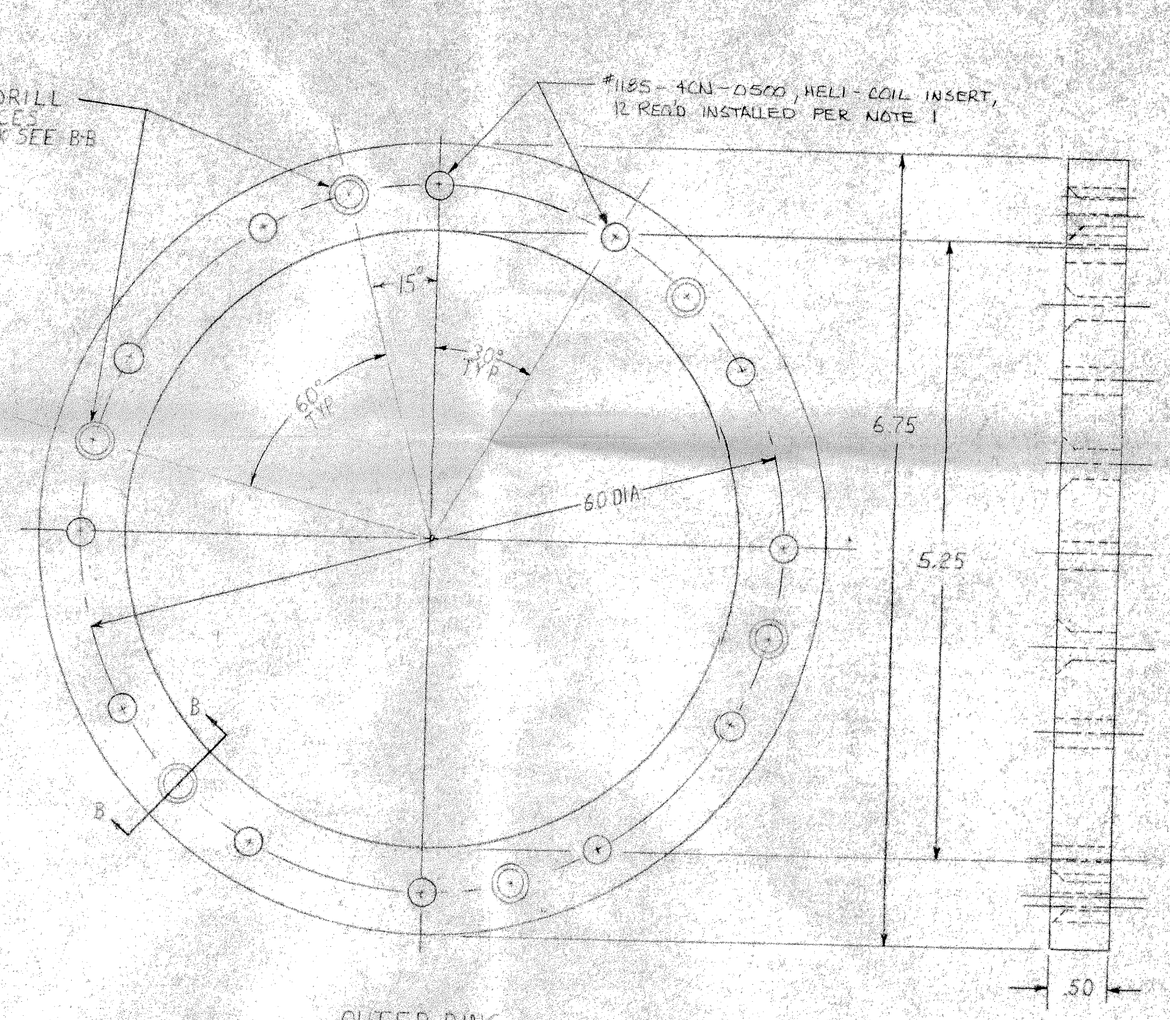
SCALE	WT.	SHEET

STANDARDBLUE, OMAHA 68127

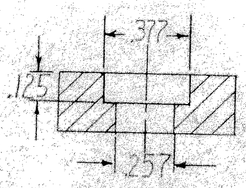
REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



INNER RING

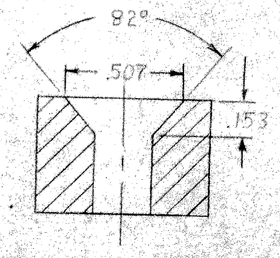


OUTER RING



SECTION A-A

NOTES: 1. DRILL 17/64 $\frac{+.261}{-.260}$ DIA. HOLE ON 6.00 DIA. BOLT CIRCLE, COUNTERSINK 120° X $\frac{+.30}{-.33}$ DIA., TAP THRU USING HELI-COIL TAP # 4CPB-H2. INSTALL INSERT USING HELI-COIL TOOL #7551-4.



SECTION B-B

FEB 171984

		UNLESS OTHERWISE SPECIFIED	DRAWN	M. WEST	5-27-83
		DIMENSIONS ARE IN INCHES	CHECKED		
		TWO PLACE DECIMALS ± .03	PROJ. ENG.	M. WEST	5-27-83
		THREE PLACE DECIMALS ± .010	MFG.		
		FRACTIONS ±	Q. C.		
		ANGLES ± 0°-30'			
		BREAK EDGES .005-.015			
		MATERIAL			
		6061 T6 ALUM.			
			RELEASE FOR PRODUCTION		
NEXT ASSY	USED ON		NO.	APPROVED	DATE
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.		

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

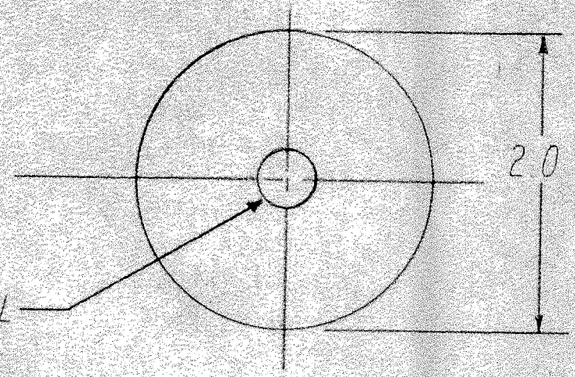
TITLE
INNER/OUTER HARD MOUNTING RINGS

CODE IDENT NO.	SIZE	DRAWING NO.
14979	C	51625

SCALE	WT.	SHEET

STANDARD BLUE, OMAHA 68127

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



MATERIAL THICKNESS - 3/16

NOTES: 1. OUTER EDGES MUST BE BUFFED TO REMOVE ANY SHARPNESS

FEB 171984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015

MATERIAL
304 STAINLESS

DO NOT SCALE DRAWING

DRAWN	M WEST	2-27-83
CHECKED		
PROJ. ENG.	M WEST	2-27-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

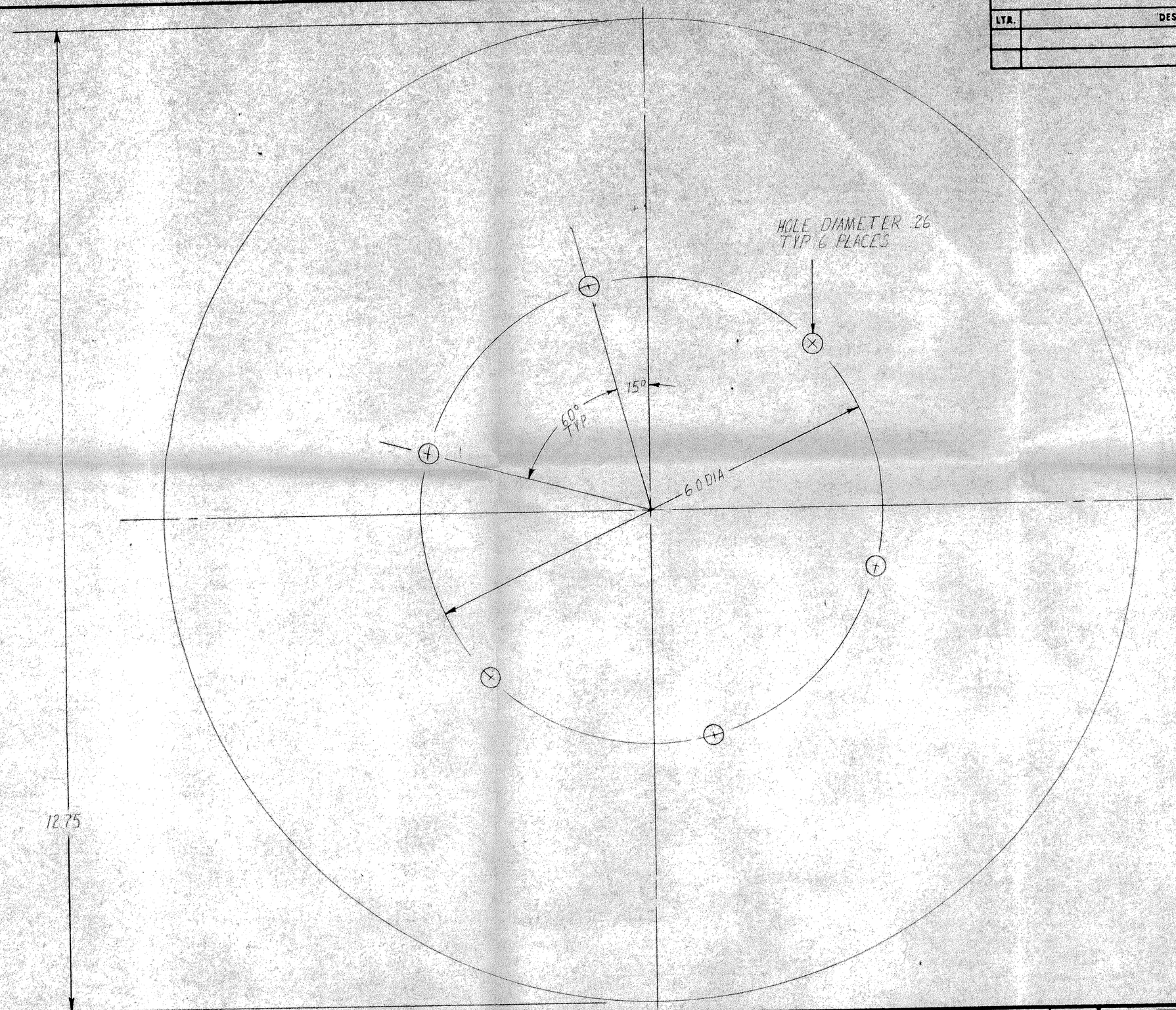
TITLE
LARGE DIA WASHER

CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	51626

SCALE	WT.	SHEET

STANDARD BLUE, OMAHA 13429

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



FEB 171984

		UNLESS OTHERWISE SPECIFIED	DRAWN	M WEST	5-27-83
		DIMENSIONS ARE IN INCHES	CHECKED		
		TWO PLACE DECIMALS ± .03	PROJ. ENG.	M WEST	5-27-83
		THREE PLACE DECIMALS ± .010	MFG.		
		FRACTIONS ±	Q. C.		
		ANGLES ± 0°–30'			
		BREAK EDGES .005–.015			
		MATERIAL REEVES DE10391A			
			RELEASE FOR PRODUCTION		
			NO.	APPROVED	DATE
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.		

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

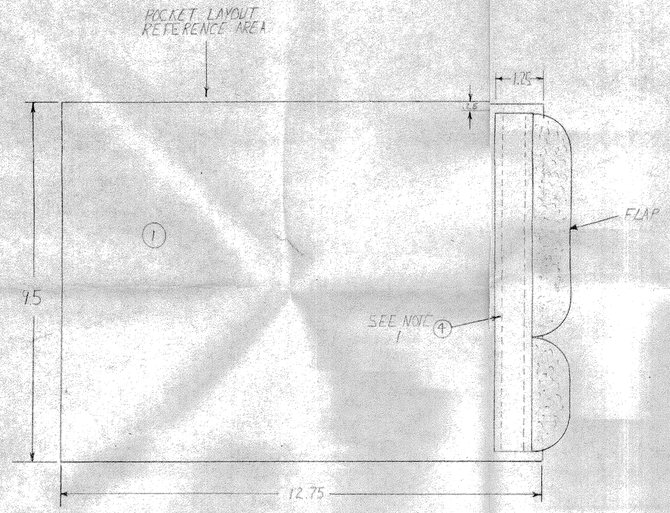
TITLE: HARD MOUNT DOUBLER

CODE IDENT NO.	SIZE	DRAWING NO.
14979	C	51629

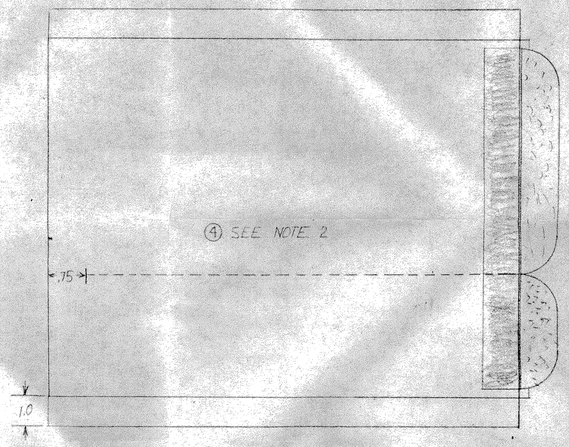
SCALE	WT.	SHEET

STANDARDBLUE, OMAHA 68127

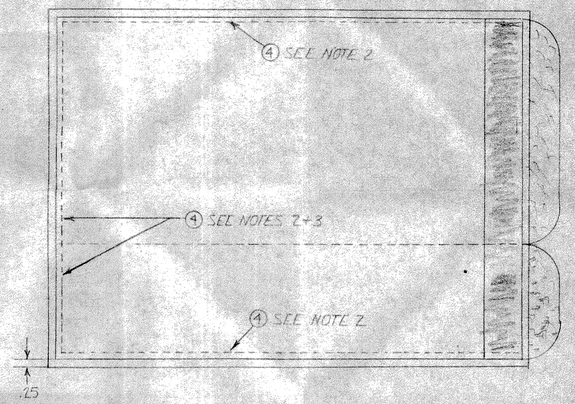
REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



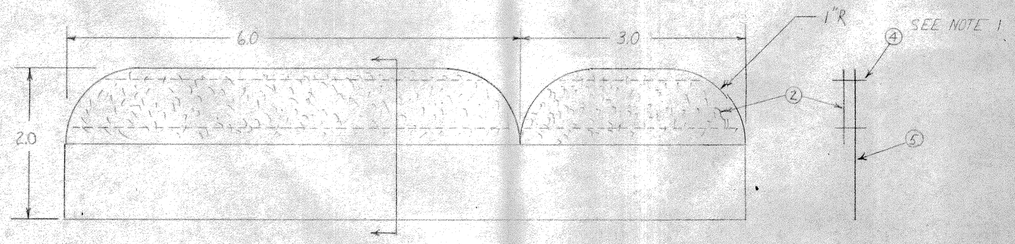
STEP 1: LAY OUT POCKET REFERENCE AREA AND SEW ON FLAP AS SHOWN



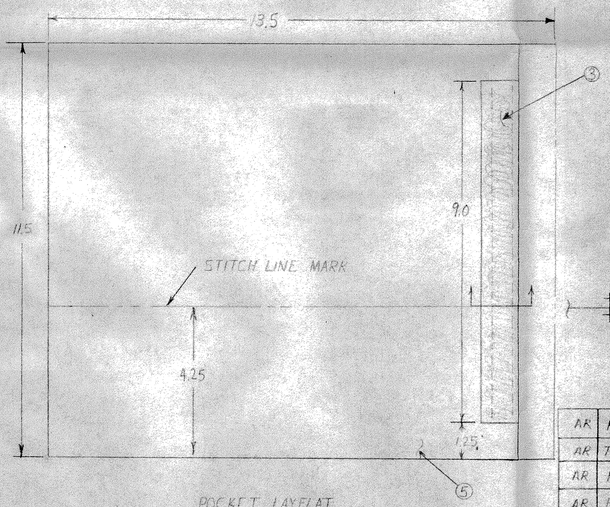
STEP 2: SEW POCKET LAYFLAT TO PANEL AS SHOWN



STEP 3: SEW SEAMS WITH 1/4" ROLL UNDER AND TUCKS PER NOTE 3



FLAP



POCKET LAYFLAT

NOTES:
1. STITCH TYPE 301 DOUBLE NEEDLE, 1/4 GA 5-8 STITCHES PER IN.
2. STITCH TYPE 301 SINGLE NEEDLE, 5-8 STITCHES PER IN
3. FULLNESS (1" EACH STITCHING) TO BE TAKEN UP WITH A TUCK AT EACH INTERSECTING LINE OF STITCHING
4. USE LARGE HALF POCKET FOR SMALL TORI

FEB 17 1984

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
AR	REEVES SILVER URE COATED					5
AR	THREAD			VT-135 TY 1 OR 2	SIZE F	4
AR	FASTENER TAPE, PILE 1"			MIL-F-21840 D TYPE 1 CLASS 1 NYLON		3
AR	FASTENER TAPE, HOOK 1"					2
AR	REEVES WHITE + SILV URE COATED			RBAD		1

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO-PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015

MATERIAL
AS SHOWN

DO NOT SCALE DRAWING

DRAWN	M WEST	10-15-83
CHECKED		
PROJ. ENG.	M WEST	10-15-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

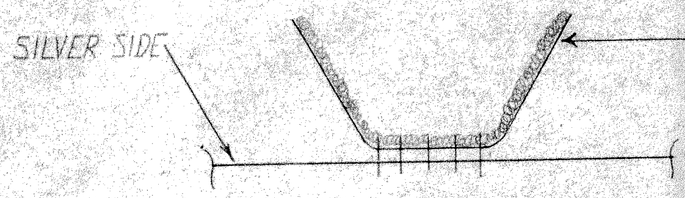
TITLE
BALLAST POCKET

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	51631

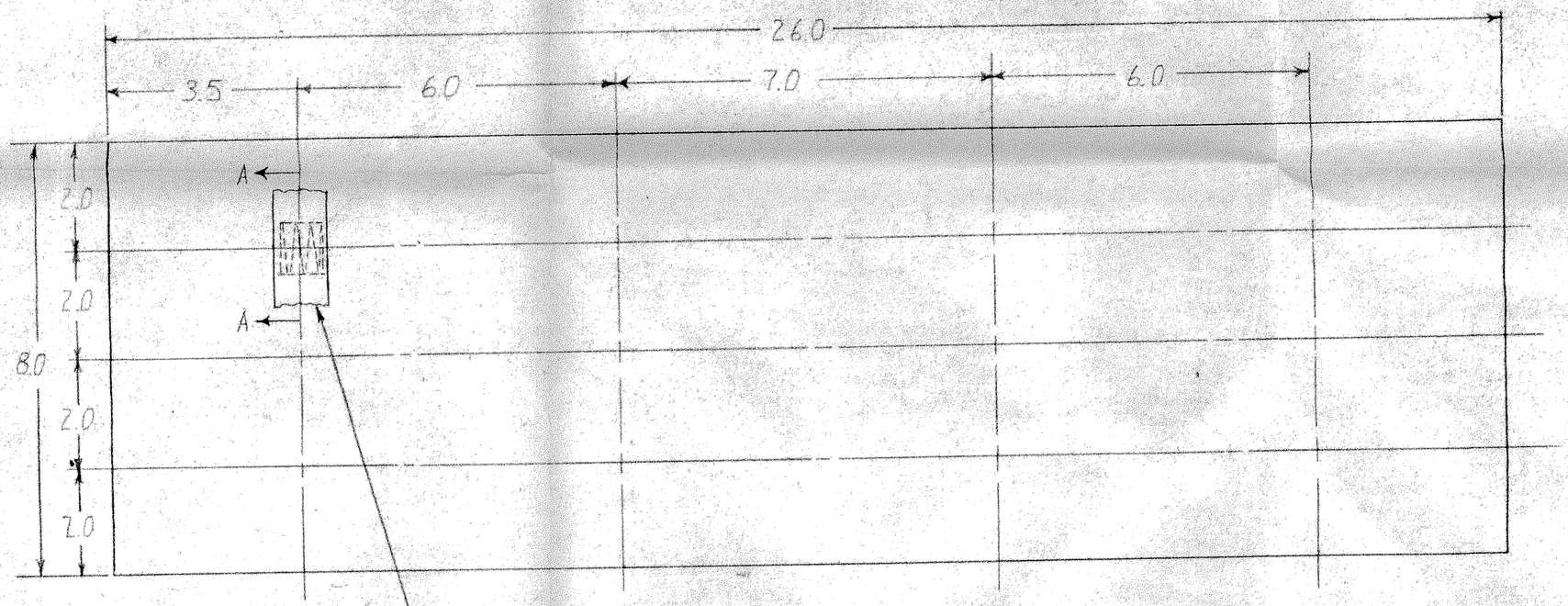
SCALE	WT.	SHEET

STANDARDBLUE, OMAHA STI01

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



"A" - "A"



WEIGHT ATTACHING TAPES TYP 12 LOCATIONS

FEB 171984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°–30'
BREAK EDGES .005–.015

MATERIAL
REEVES DE10391A

DO NOT SCALE DRAWING

DRAWN	M. WEST	6-16-83
CHECKED		
PROJ. ENG.	M. WEST	6-16-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION		
NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

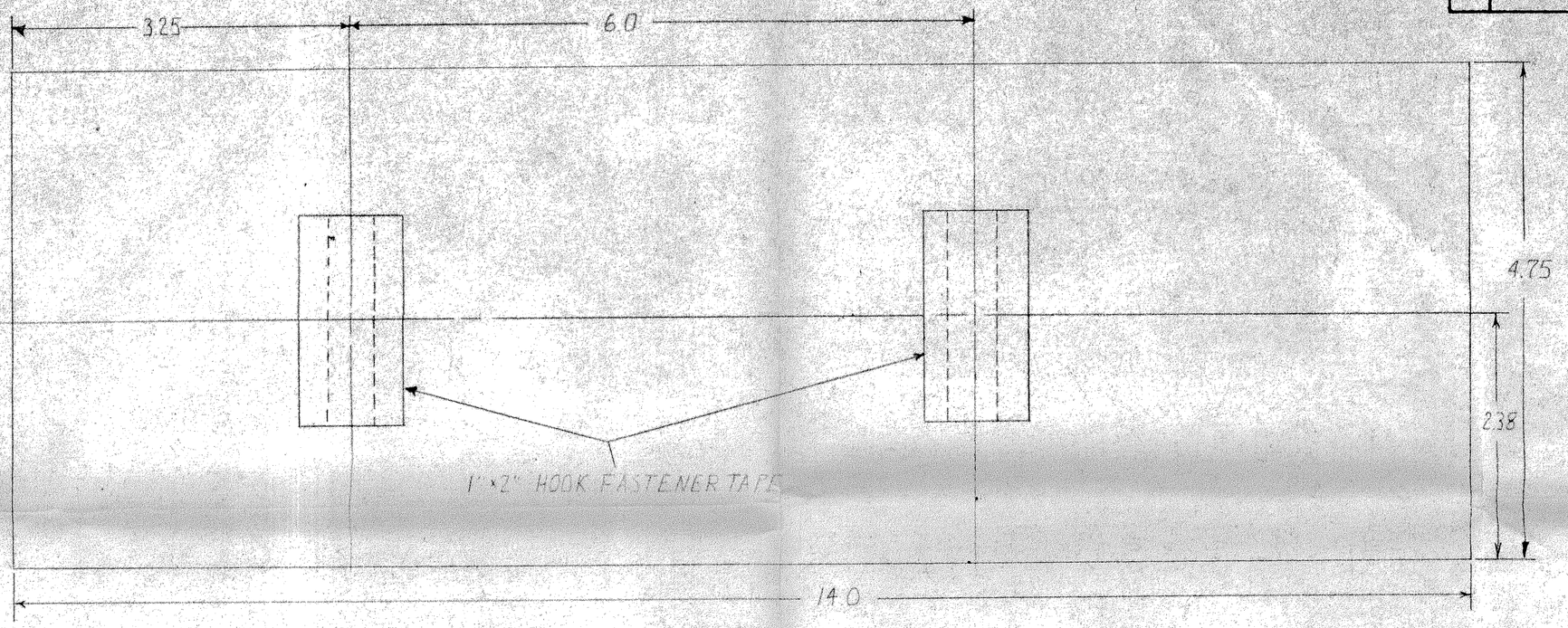
TITLE
GROSS BALLAST ATTACHING PATCH

CODE IDENT NO.	SIZE	DRAWING NO.
14979	C	51636

SCALE	WT.	SHEET

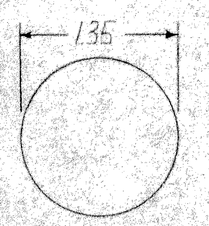
STANDARDBLUE, OMAHA 26627

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



LAY FLAT

FOLD OVER AND STITCH SIDE + END
FOLD WITH VELCRO ON INSIDE



FILLED TUBE PROFILE

NOTES: 1. AFTER STITCHING SIDE AND END, TURN TUBE INSIDE OUT.
2. FILL TUBE WITH LEAD SHOT TO A NOMINAL WEIGHT OF 3.75 LBS. STITCH FIN SEAM IN OPEN END AND TRIM EXCESS MATERIAL.
3. STITCH TYPE 301, SINGLE NEEDLE 5-8 STITCHES PER INCH.
4. FILL TO 4.2 LBS FOR STTA

FEB 171984

		UNLESS OTHERWISE SPECIFIED	DRAWN	K. WEST	6-16-83
		DIMENSIONS ARE IN INCHES	CHECKED		
		TWO PLACE DECIMALS ± .03	PROJ. ENG.	M. WEST	6-16-83
		THREE PLACE DECIMALS ± .010	MFG.		
		FRACTIONS ±	Q. C.		
		ANGLES ± 0°-30'			
		BREAK EDGES .005-.015			
		MATERIAL			
		COATED TAFFETTA LOGGING BALLON SKIRT MATERIAL			
			RELEASE FOR PRODUCTION		
NEXT ASSY	USED ON		NO.	APPROVED	DATE
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.		

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE: GROSS BALLAST WEIGHTS

CODE IDENT NO.	SIZE	DRAWING NO.
14979	C	51637

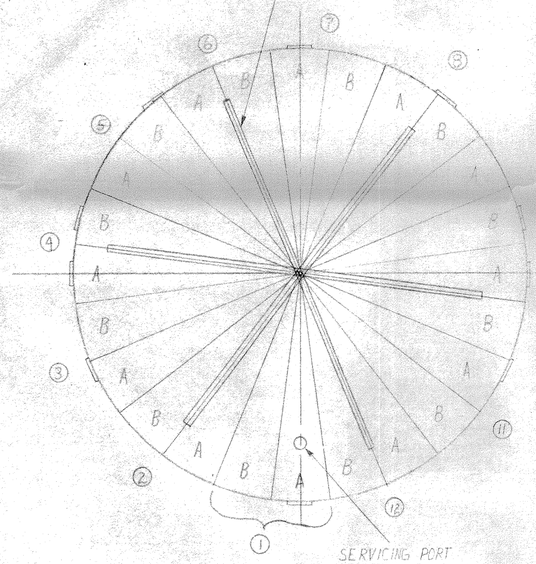
SCALE	WT.	SHEET

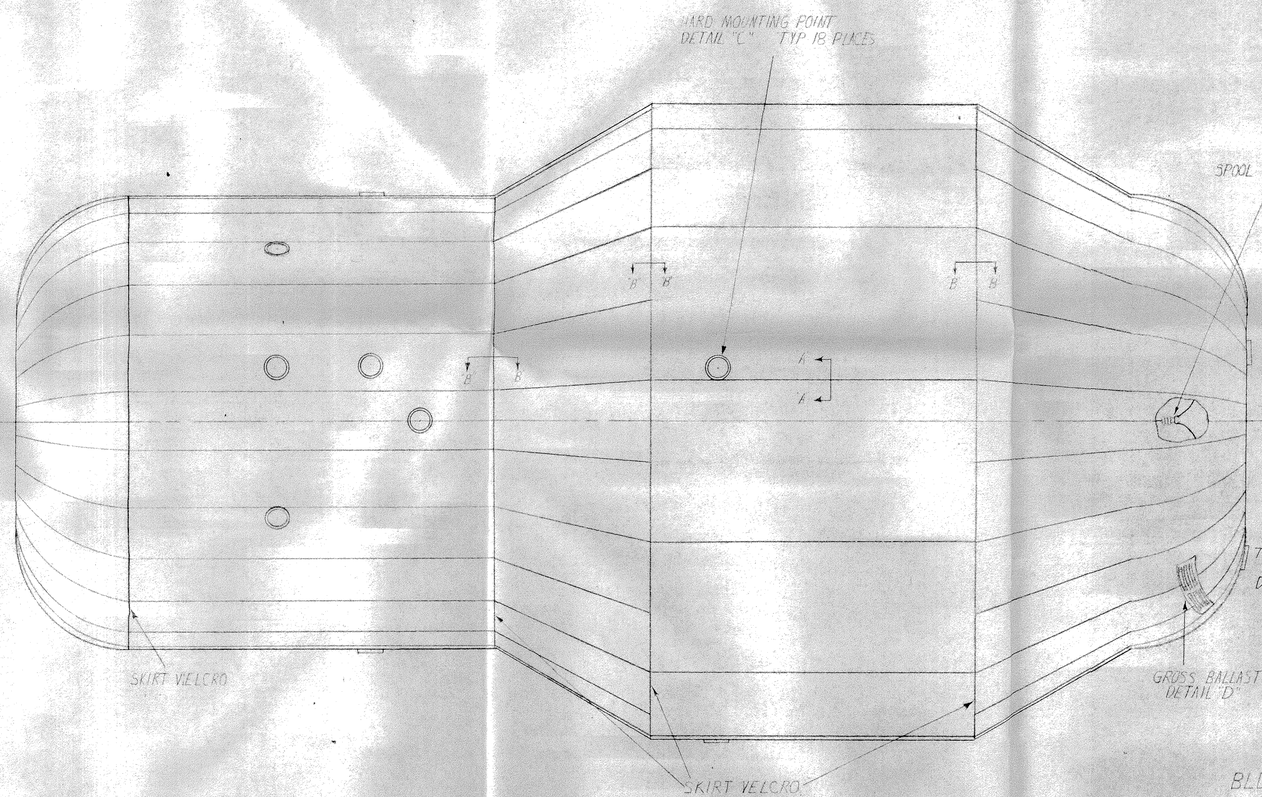
STANDARDBLUE, OMAHA 68687

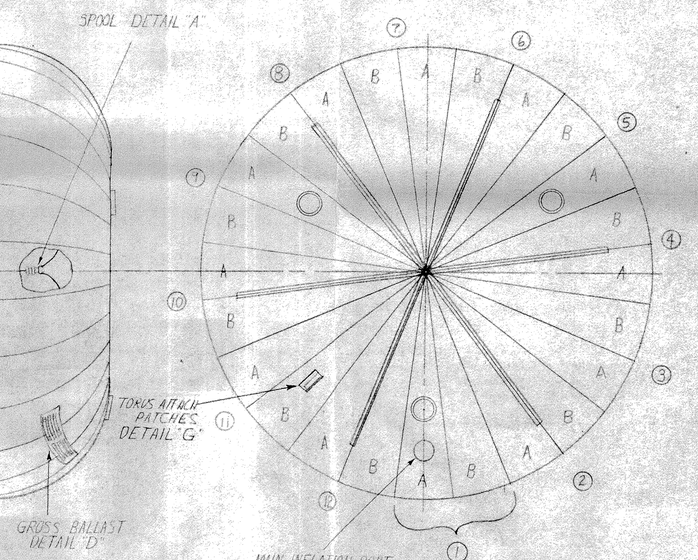
4 3 2 1

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

STTA IS CONSTRUCTED OF 12 MAJOR GORES
ENDS OF MAJOR GORES SUBDIVIDE TO FORM
MINOR GORES.







FEB 171984

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

DO NOT SCALE DRAWING

DRAWN	M.WEST	12-1-83
CHECKED		
PROJ. ENG.	M.WEST	12-1-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE
STTA MAIN ENVELOPE
AFT SECTION

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	51648

SCALE	WT.	SHEET 1 OF 4

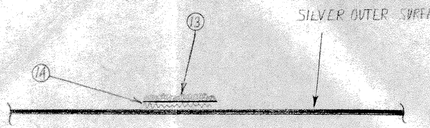
STANDARD BLUE, OMAHA 57101

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

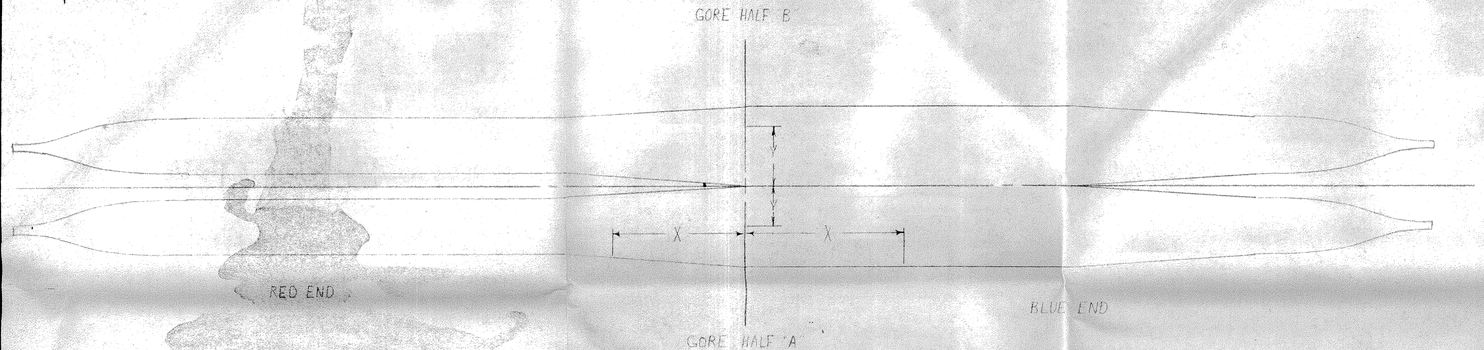
RIP JOINT W/2" SEAL STRIP

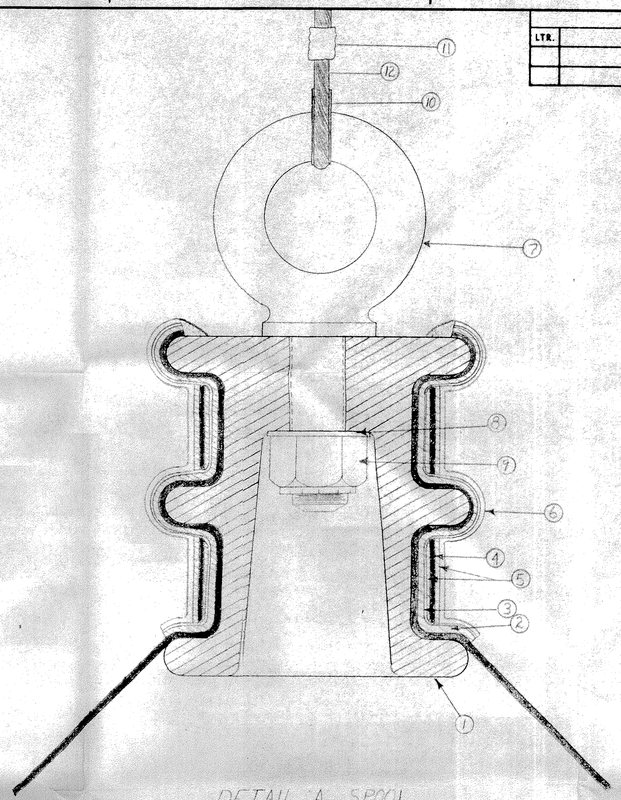
SILVER OUTER SURFACE

SECTION A-A



SECTION B-B





DETAIL 'A' SPOOL

NUMBER	TYPE OF HARDWARE	GORE #	END	GORE HALF	X	Y	DETAIL	REMARKS
1	HARD MOUNT RINGS	4	BLUE	A	178.59	10.5	C	
2		9	BLUE	A	178.59	10.5	C	
3		5	BLUE	A	178.57	10.5	C	
4		4	RED	A	70.03	10.5	C	
5		10	RED	A	70.03	10.5	C	
6		4	RED	B	83.29	8.97	C	
7		9	RED	B	83.29	12.02	C	
8		1	RED	A	83.29	10.5	C	
9		7	RED	A	83.29	10.5	C	
10		3	RED	A	108.71	5.43	C	
11		11	RED	A	108.71	15.57	C	
12		5	RED	B	108.71	15.57	C	
13		8	RED	B	108.71	5.43	C	
14		4	RED	B	108.71	8.97	C	
15		9	RED	B	108.71	12.02	C	
16		4	BLUE	B	180.-	2.93	C	
17		3	BLUE	B	180.3	18.07	C	
18	▼	1	BLUE	A	180.3	10.5	C	
19	MAIN INFLATION PORT	6	BLUE	A	170.0	10.5	B	
20	SERVICING PORT	1	RED	A	184.7	10.5	E	
21	GROSS BALLAST	12	BLUE	A	168.3	10.3	D	

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
AR	ADHESIVES					14
AR	1" PILE FASTENER TAPE				MIL-F-21840D TYPE CL1	13
AR	WIRE ROPE 1-19 7/32"				5600#	12
2"	WIRE ROPE SLEEVE 7/32"					11
2	WIRE ROPE THIMBLE 7/32"					10
2	FLAT WASHER 3/4"		51017-23		AN 960-1216	9
2	SELF LOCKING NUT 3/4"		51015-24		4 NC-120	8
2	SHOULDER EYE BOLT		51019-11		5200#	7
AR	TAPE 2" WIDE		51054-22		SSA-10 WHT	6
AR	TAPE 1" WIDE		51054-24		#890 3M	5
AR	STEEL BANDING 3/4"		51039-04		COMMERCIAL	4
AR	TAPE 1" WIDE		51054-23		#480 3M	3
AR	PLASTIC WRAP				POLYETHYLENE 2.3 MIL	2
2	SPOOL, LARGE		B-51900		AL	1

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

DO NOT SCALE DRAWING

DRAWN	
CHECKED	
PROJ. ENG.	
MFG.	
Q. C.	

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE
STTA MAIN ENVELOPE
AFT SECTION

FEB 171984

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	51648

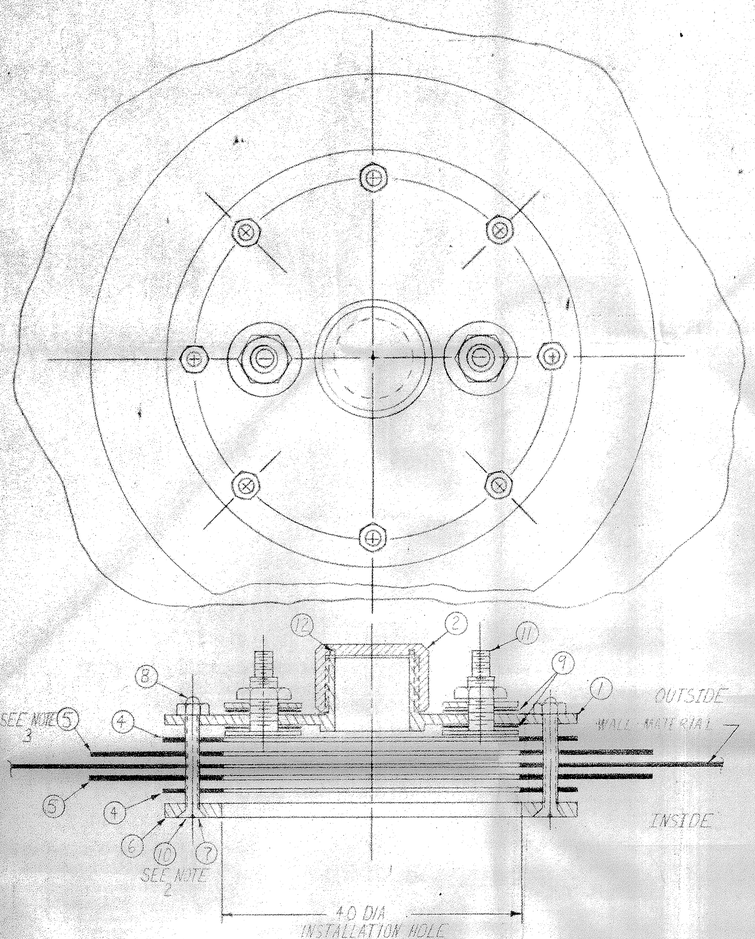
SCALE | WT. | SHEET 2 OF 4

STANDARDBLUE, OMAHA ST101

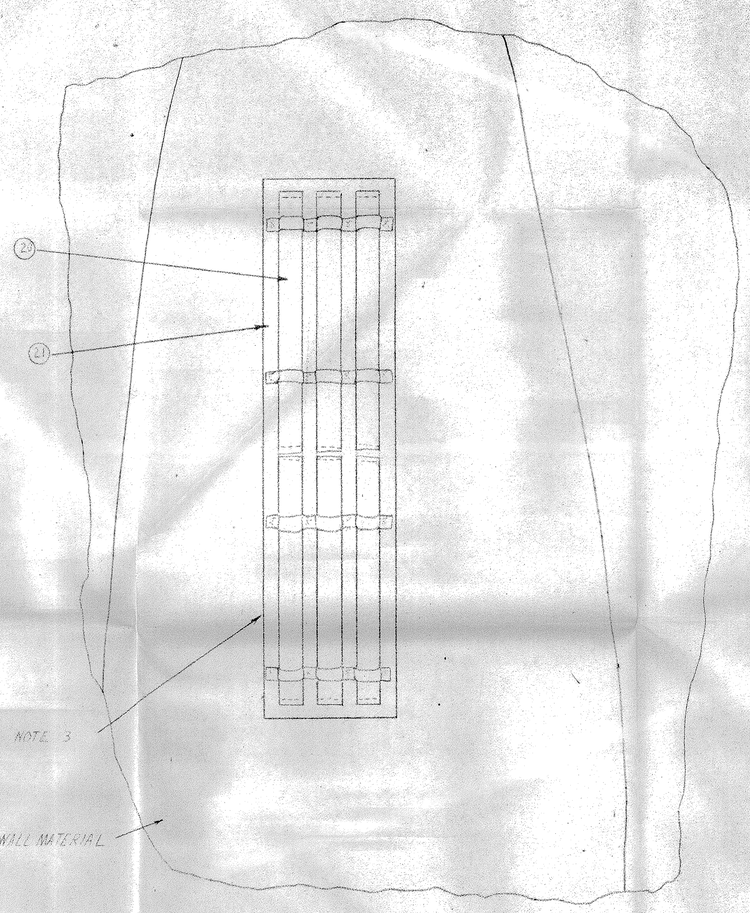
REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

NOTES:

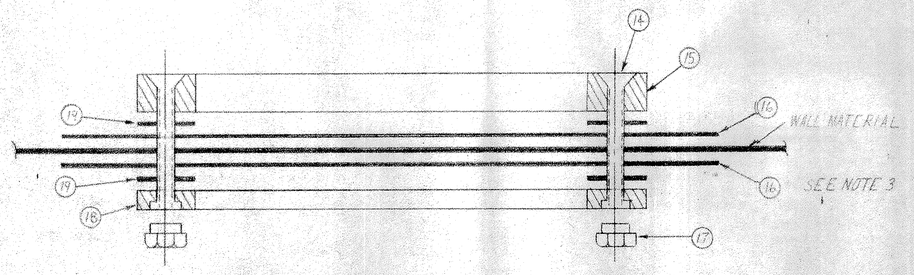
1. DIFFUSER, ITEM #3, IS INSERTED IN OPENING AFTER CAP IS REMOVED. FILL HOSE IS THEN SCREWED ON HOLDING DIFFUSER IN PLACE.
2. EPOXY, ITEM #10, TO SECURE SCREW HEAD FROM TURNING AND FALLING OUT.
3. ADHESIVE, ITEM #13, TO BE USED TO BOND DOUBLER TO WALL.



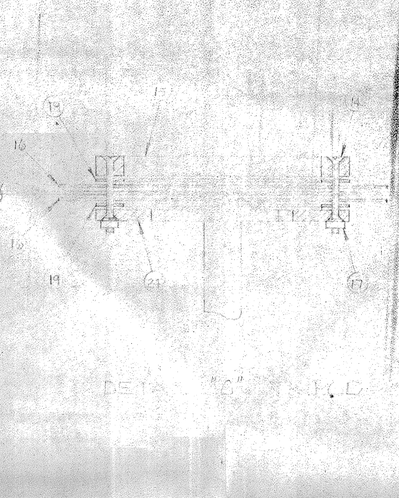
DETAIL "B" MAIN INFLATION PORT



DETAIL "D" GROSS BALLAST



DETAIL "C" HARD MOUNTING POINT



DETAIL "A" INNER PLATE

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
1	GROSS BALLAST MOUNT		C-51636			21
AR	WEIGHTED TUBING		C-51637			20
2	GASKET		C-51624			19
1	INNER HARD MOUNT RING		C-51625			18
6	SPLINE NUT		51016-06			17
2	DOUBLER		C-51629			16
1	OUTER HARD MOUNT RING		C-51625			15
6	FLAT HEAD SCREWS NEX 10-32		1/4-20			14
AR	ADHESSIVE		#7130		BOSTICK PARKER	13
1	O-RING		2-902			12
2	TIRE VALVE					11
AR	EPOXY		EC 2216 B/A		3M	10
2	GASKET TIRE VALVE		B-14495			9
8	NUT CAP #10-32		22NKM-02			8
8	FLAT HEAD SCREW #10-32x3/4			MS-35191-274		7
1	STUD RING		B-14494			6
2	DOUBLER		B-14493			5
2	GASKET		B-14492			4
1	DIFFUSER		B-14491			3
1	CAP		B-14490			2
1	TOP PLATE WELDMENT		B-14488			1

LIST OF MATERIALS OR PARTS LIST

FEB 17 1984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

DO NOT SCALE DRAWING

DRAWN	LLM	6-27-83
CHECKED		
PROJ. ENG.	M WEST	7-27-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

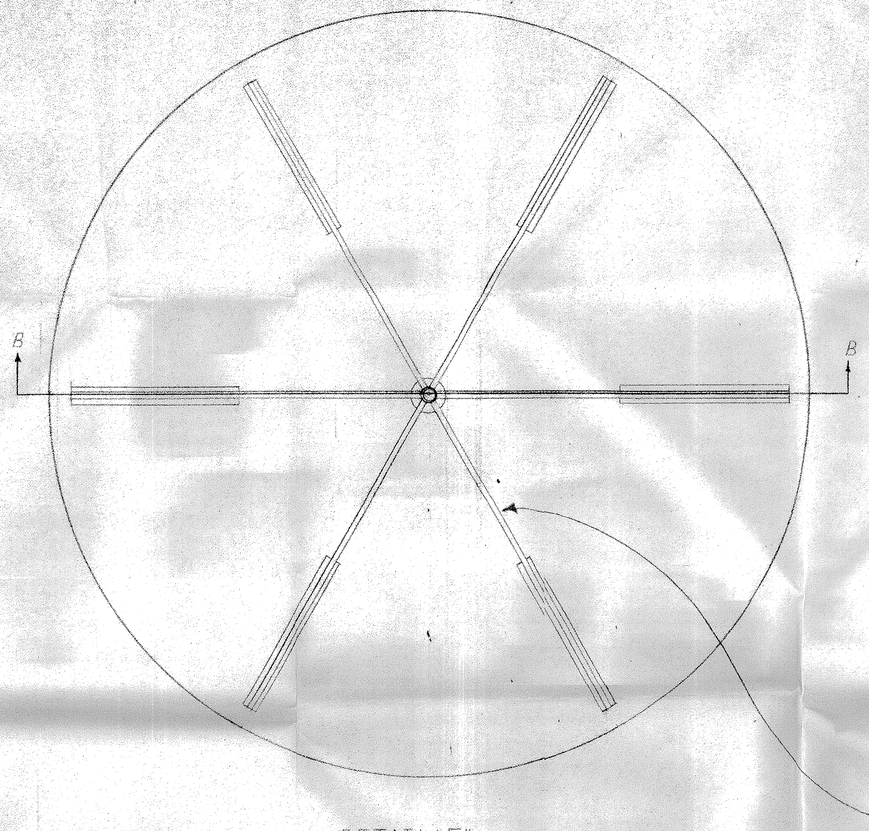
TITLE
STTA MAIN ENVELOPE
AFT SECTION

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	D-51648

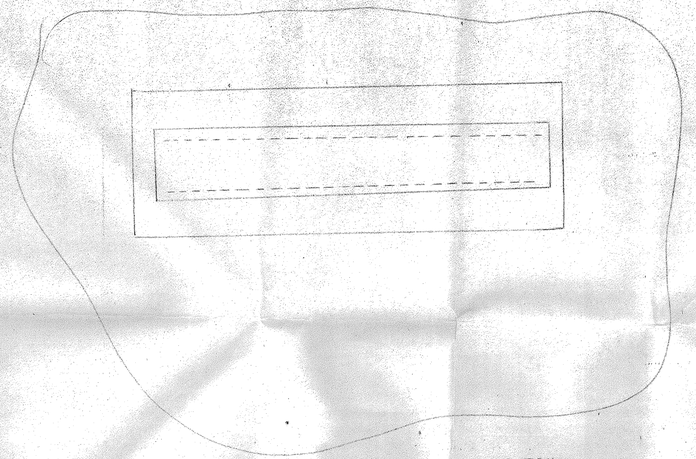
SCALE | WT. | SHEET 3 OF 4

STANDARD BLUE, OMAHA 27101

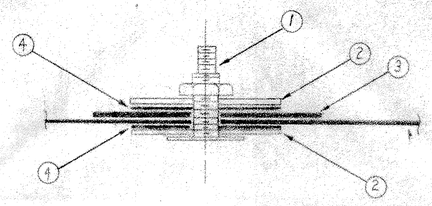
REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



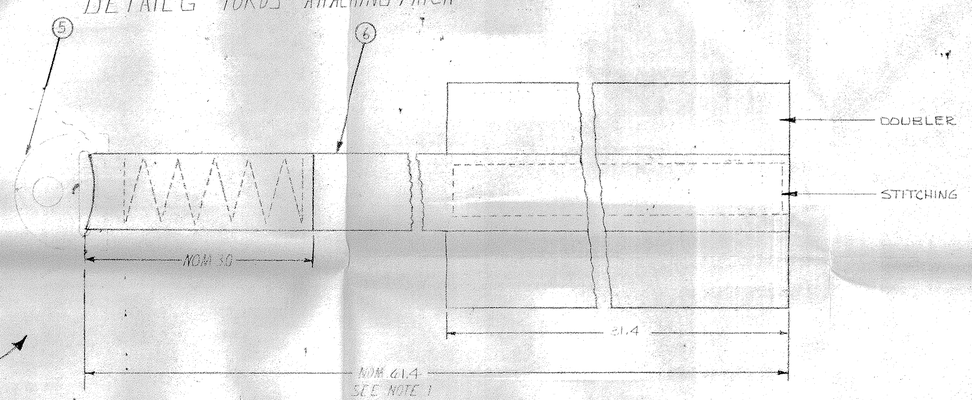
DETAIL "F"
END TIE DOWN ASSEMBLY

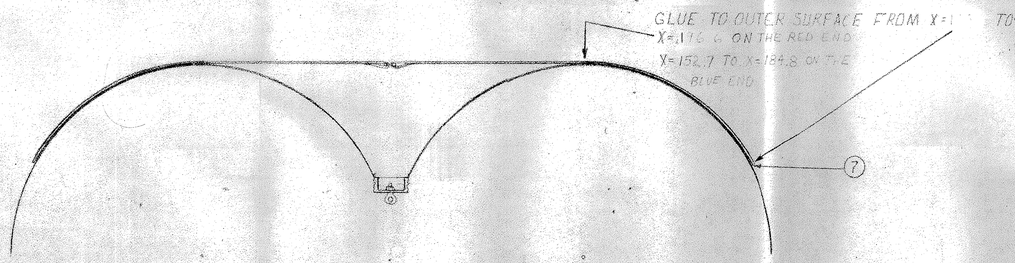


DETAIL G TORUS ATTACHING PATCH



DETAIL E STEM VALVE MOUNT





SECTION C-C

NOTES: 1. TAPE SHOULD BE GLUED TO RESPECTIVE GORES DURING ASSEMBLY AND FITTED TO THE RING DURING AIR INFLATION. A MINIMUM OF 1 INCH SLACK SHOULD BE ALLOWED DURING FITTING BETWEEN END OF GLUEING AND RING.
2. TAPES SHOULD BE GLUED TO THE MIDDLE OF THE FOLLOWING GORES AT EACH END: 1B, 2A, 4B, 6A, 7B, 9A

FEB 171984

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
AR	ADHESIVE					7
16	TIE DOWN TAPES		MIL-T-5038-T3 1"			6
16	TIE DOWN RING					5
12	GASKETS		B-51622			4
1	DOUBLER		B-51623			3
12	LARGE DIA WASHER		B-51626			2
1	TIRE VALVE					1

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO-PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

DO NOT SCALE DRAWING

DRAWN	L.L.M.	12-7-83
CHECKED		
PROJ. ENG.	M. WEST	12-7-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

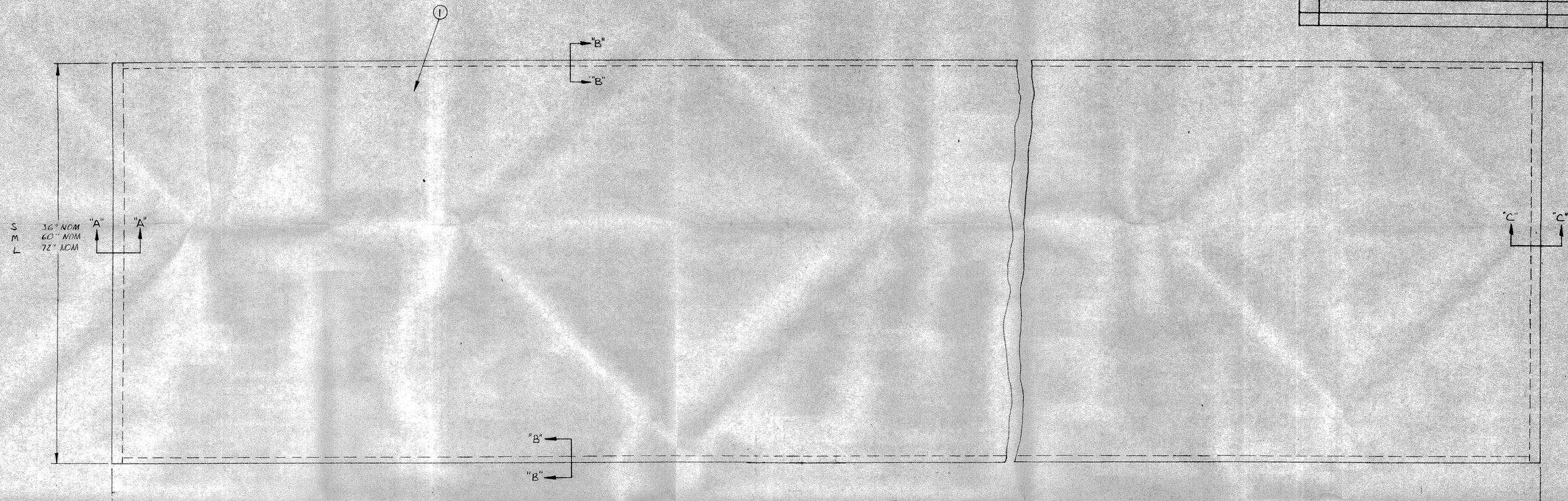
TITLE
STTA MAIN ENVELOPE
AFT SECTION

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	D-51648

SCALE | SHEET 4 OF 4

STANDARDBLUE, OMAHA 68101

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



NOTES: 1. STITCH TYPE 301, SINGLE NEEDLE, 5-8 STITCHES PER INCH.
2. STITCH TYPE 301, DOUBLE NEEDLE, ½" GA, 5-8 STITCHES PER INCH.

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
AR	FASTENER TAPE; HOOK 1"		MIL-F-21840 D	TYPE II CLI NYLON	SEAR ENDS	6
AR	FASTENER TAPE; PILE 1"		MIL-F-21840 D	TYPE II CLI NYLON	SEAR ENDS	5
AR	FASTENER TAPE; HOOK 2"				SEAR ENDS	4
AR	FASTENER TAPE; PILE 2"				SEAR ENDS	3
AR	THREAD			V-T-285 TYPE 10R2	SIZE F	2
AR	SKIRT/END PANEL MAT'L.					1

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

DRAWN	LLM	6-28-83
CHECKED		
PROJ. ENG.	MLW	7-28-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION		
NO.	APPROVED	DATE

DO NOT SCALE DRAWING
CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE
STTA SKIRTS

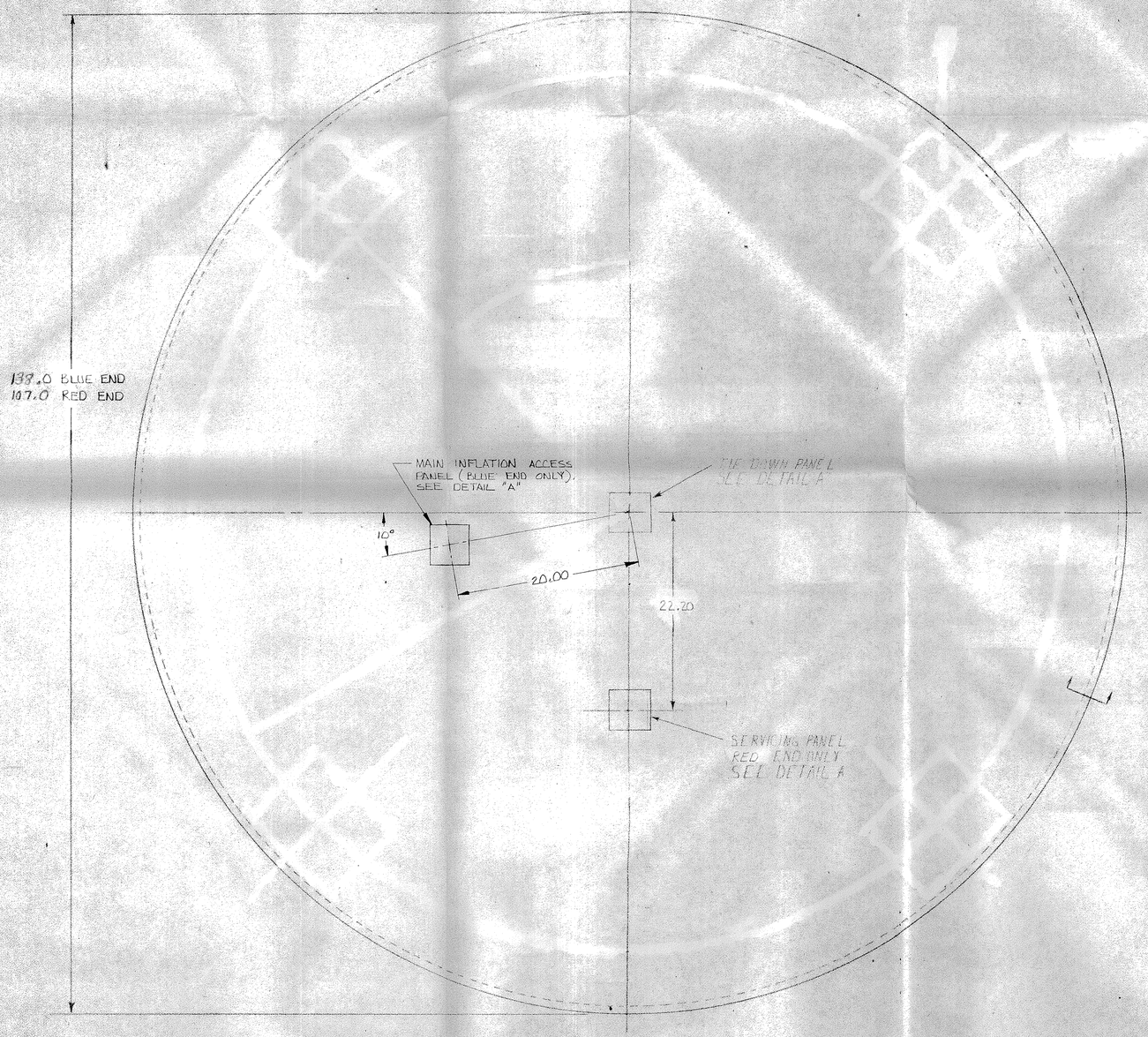
FEB 171984

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	D-51649

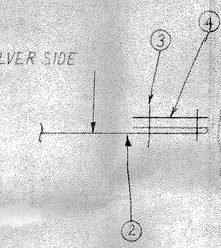
SCALE | WT. | SHEET

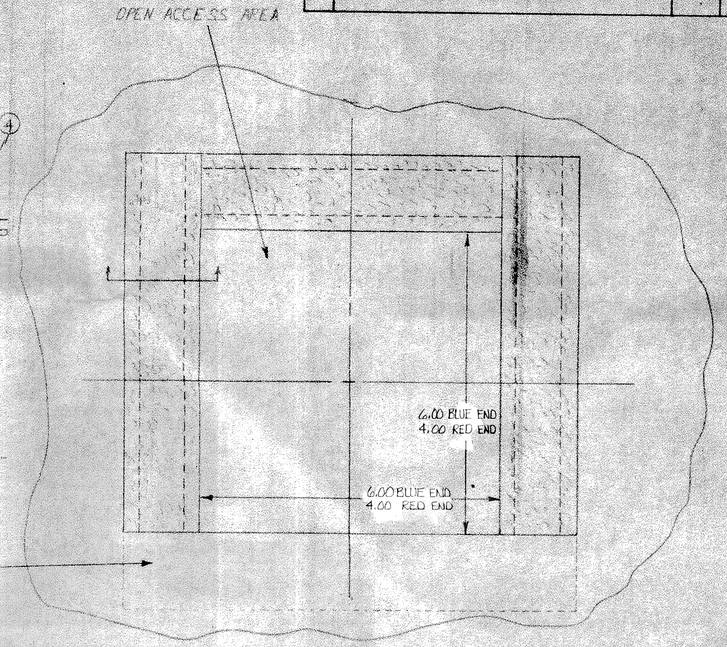
STANDARDBLUE, OMAHA 67101

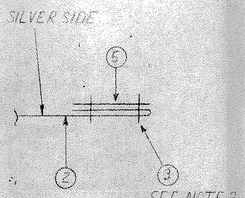
REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

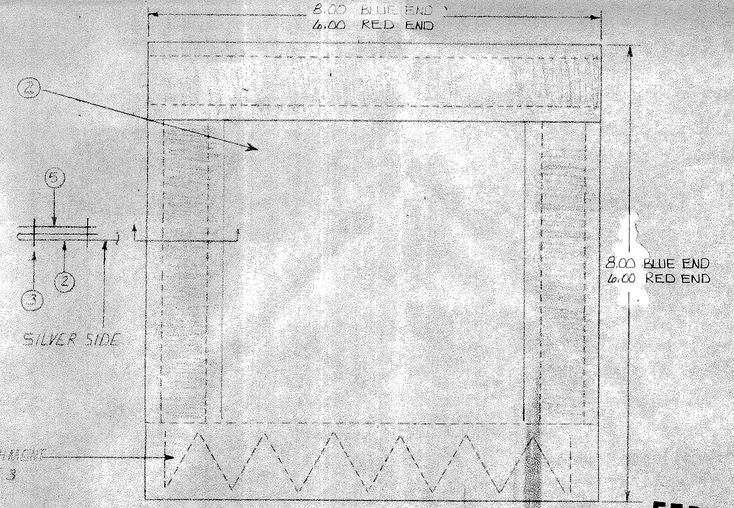


NOTES: 1. SEE DRAWING D-51631 FOR INSTRUCTIONS ON LAYOUT AND ATTACHMENT O BALLAST POCKET.
2. STITCH TYPE 301, DOUBLE NEEDLE, ½" GA 5 TO 8 STITCHES PER INCH
3. STITCH TYPE 301, SINGLE NEEDLE, 5-8 STITCHES PER INCH









DETAIL "A" PANEL AND OPENING

FEB 171984

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

DRAWN	LLM	6-26-83
CHECKED		
PROJ. ENG.	M.WEST	7-27-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

DO NOT SCALE DRAWING
CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

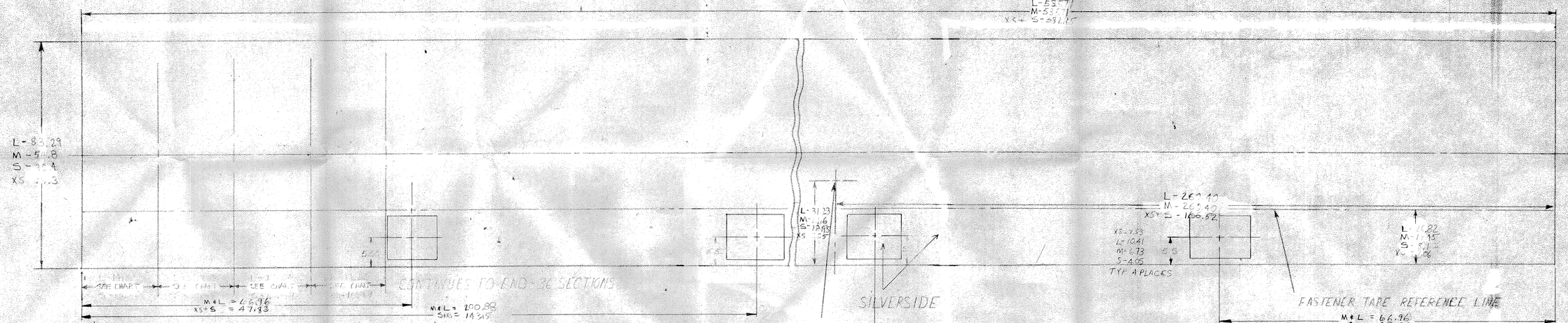
TITLE: END PANELS STTA

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	D-51650

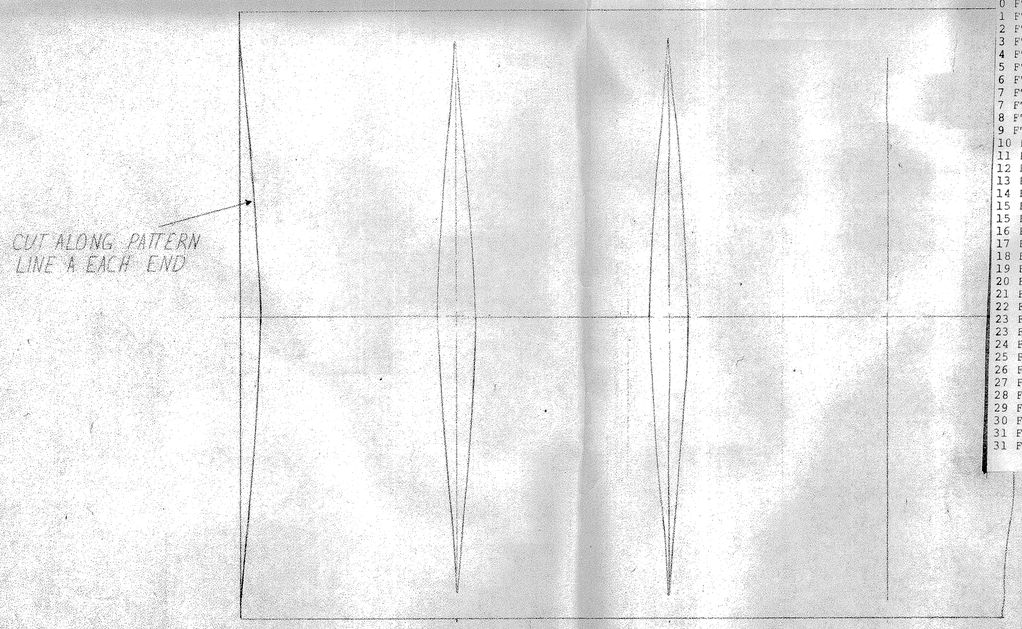
SCALE | WT. | SHEET

STANDARDSLINE, OMAHA 97181

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



STEP #1: LAY OUT MATERIAL AS SHOWN WITH ℄ LOCATED AS REQ'D FOR LENGTH OF MATERIAL AND SIZE OF TORI, ALSO MARK STEM VALVE AND FASTENER TAPE REF LINE.



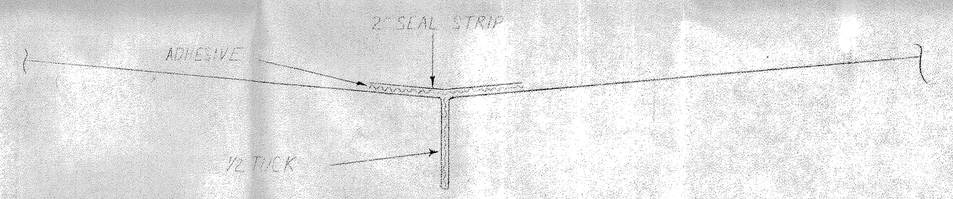
STEP #2: MARK OUTLINE OF TUCK TO BE MADE AT EACH C/L SEE PATTERN-SHEET 4

T [illegible] PATTERN

0 FT	0 IN	0 FT	0 IN
0 FT	10.6291 IN	1 FT	2.88071 IN
1 FT	9.25816 IN	2 FT	5.76143 IN
2 FT	7.88724 IN	3 FT	8.64214 IN
3 FT	6.51632 IN	4 FT	11.5229 IN
4 FT	5.1454 IN	6 FT	2.40356 IN
5 FT	3.77448 IN	7 FT	5.28428 IN
6 FT	2.40356 IN	8 FT	8.16499 IN
7 FT	1.03264 IN	9 FT	11.0457 IN
7 FT	11.6617 IN	11 FT	1.92641 IN
8 FT	10.2908 IN	12 FT	4.80713 IN
9 FT	8.91988 IN	13 FT	7.68786 IN
10 FT	7.54896 IN	14 FT	10.5686 IN
11 FT	6.17804 IN	16 FT	1.44926 IN
12 FT	4.80711 IN	17 FT	4.32999 IN
13 FT	3.4362 IN	18 FT	7.21069 IN
14 FT	2.06528 IN	19 FT	10.0914 IN
15 FT	.69437 IN	21 FT	.972107 IN
15 FT	11.3234 IN	22 FT	3.85281 IN
16 FT	9.95252 IN	23 FT	6.73352 IN
17 FT	8.58161 IN	24 FT	9.61425 IN
18 FT	7.21067 IN	26 FT	.494957 IN
19 FT	5.83976 IN	27 FT	3.37571 IN
20 FT	4.46885 IN	28 FT	6.25642 IN
21 FT	3.09792 IN	29 FT	9.13712 IN
22 FT	1.72703 IN	31 FT	.0178299 IN
23 FT	.356072 IN	32 FT	2.89851 IN
23 FT	10.9852 IN	33 FT	5.77922 IN
24 FT	9.61423 IN	34 FT	8.65997 IN
25 FT	8.24334 IN	35 FT	11.5407 IN
26 FT	6.87241 IN	37 FT	2.42139 IN
27 FT	5.5015 IN	38 FT	5.30209 IN
28 FT	4.13056 IN	39 FT	8.1828 IN
29 FT	2.75965 IN	40 FT	11.0635 IN
30 FT	1.38874 IN	42 FT	1.94421 IN
31 FT	.0178299 IN	43 FT	4.82497 IN
31 FT	10.6469 IN	44 FT	7.70563 IN

NOTE: THE DIMENSIONS THAT ARE SHOWN WILL HAVE LETTERS DENOTING THE FOLLOWING:

L = LARGE
M = MIDDLE
S = SMALL
XS = EXTRA SMALL



STEP #3: PLACE ADHESIVE ON TUCK PATTERN AREA, FOLD TUCK AT C/L AND ADHERE TWO HALVES OF TUCK. ADHERE 2 IN SEAL STRIP DIRECTLY OVER TUCK AND TO EXTEND 1 IN BEYOND END OF TUCK.

FEB 171984

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°–30'
BREAK EDGES .005–.015
MATERIAL

DRAWN	L.J.M.	4-18-83
CHECKED		
PROJ. ENG.		
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

DO NOT SCALE DRAWING
CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

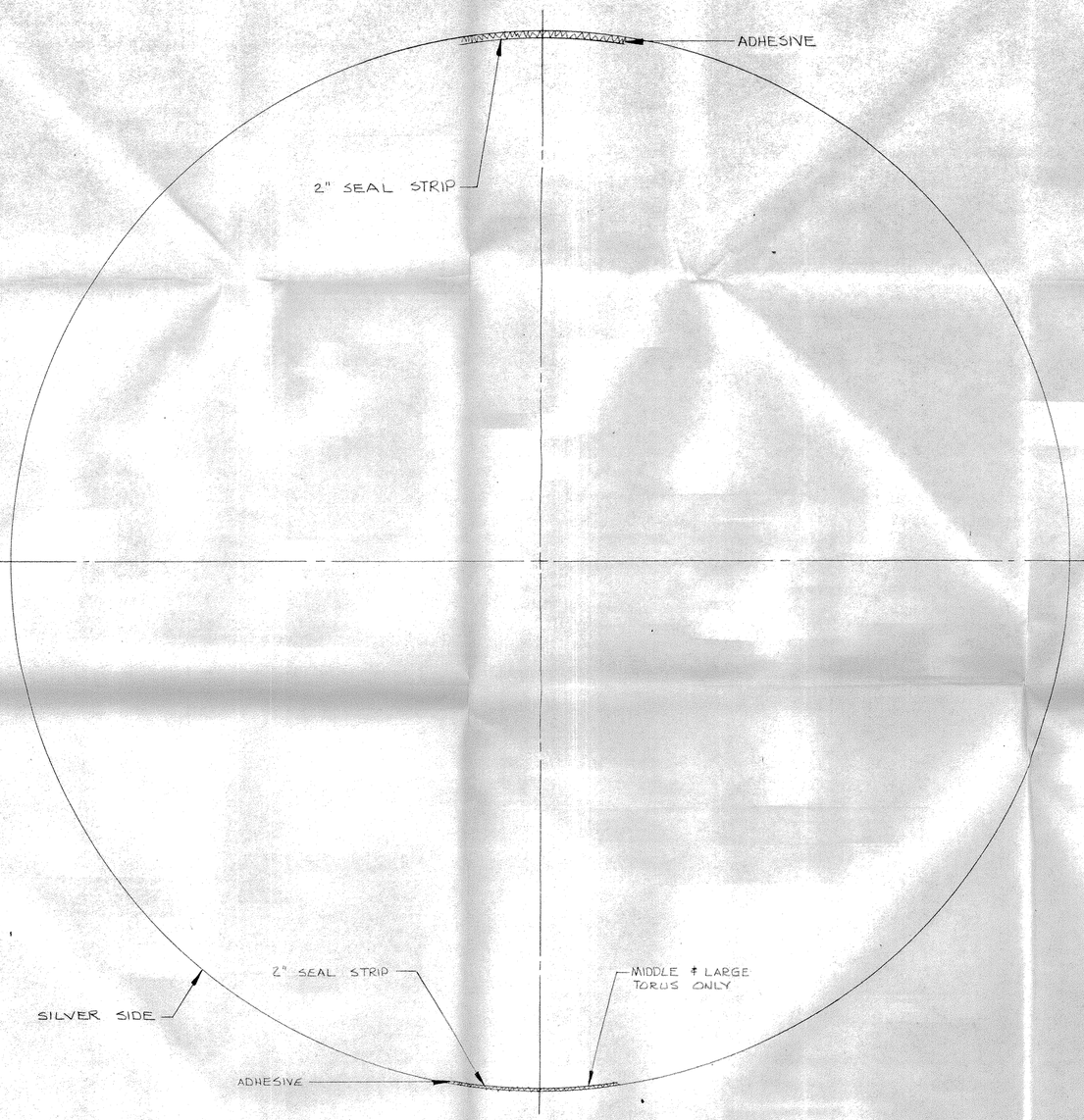
TITLE
LARGE
MIDDLE – STTA TORI
SMALL
X-SMALL

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	D-51651

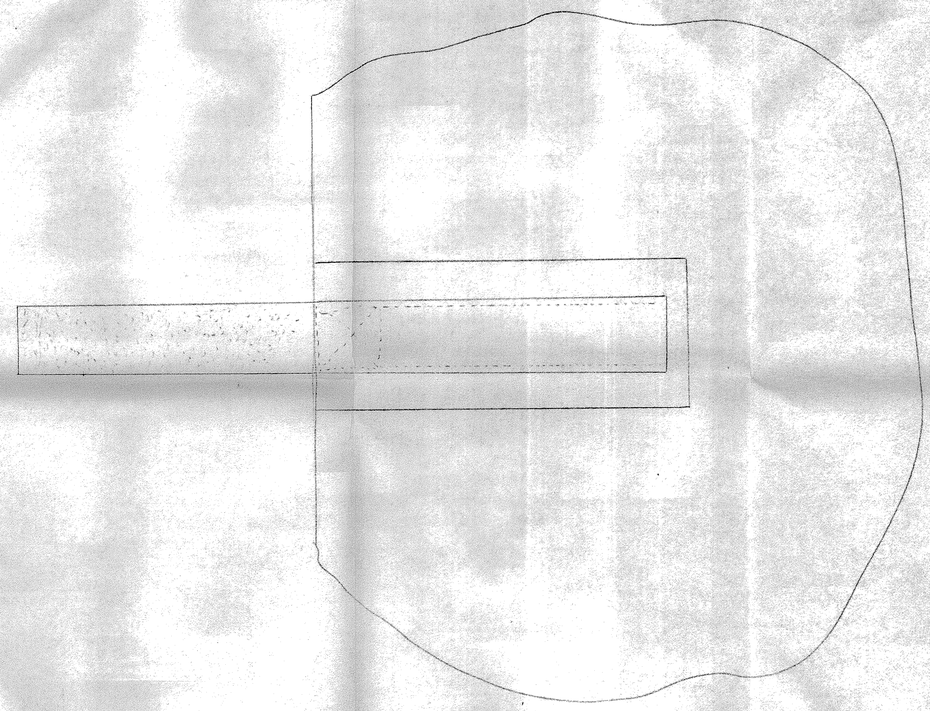
SCALE | WT. | SHEET 1 OF 3

STANDARD DRILLING, DIANA 87101

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



STEP # 5: FORM LAYFLAT INTO TUBE USING 2 IN. SEAL STRIP ON INSIDE OF BUTT SEAM.



DETAIL "A" TORUS FASTENING STRAP

FEB 171984

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

DO NOT SCALE DRAWING

DRAWN	LLM	6-28-83
CHECKED		
PROJ. ENG.	MLW	8-1-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE
STTA TORUS

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	D-51651

SCALE | WT. | SHEET 2 OF 3

STANDARDBLUE, OMAHA X7101

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

GORE PATTERN FOR A 36 GORE TORUS FOR THE STTA

MEDIUM

1/2 GORE WIDTH	GORE LENGTH X	1/2 TUCK WIDTH Y
7.44036	0	1.52193
7.43746	.760965	1.51903
7.4288	1.52193	1.51037
7.41443	2.2829	1.496
7.39447	3.04386	1.47603
7.36906	3.80483	1.45063
7.33841	4.56579	1.41998
7.30274	5.32676	1.38431
7.26232	6.08772	1.34389
7.21748	6.84869	1.29904
7.16853	7.60965	1.2501
7.11586	8.37062	1.19743
7.05987	9.13159	1.14144
7.00099	9.89255	1.08256
6.93966	10.6535	1.02122
6.87634	11.4145	.957911
6.81153	12.1754	.893099
6.74571	12.9364	.82728
6.67939	13.6974	.760958
6.61307	14.4583	.694635
6.54725	15.2193	.628817
6.48244	15.9803	.564005
6.41912	16.7412	.500692
6.35779	17.5022	.43936
6.29891	18.2632	.380475
6.24292	19.0241	.324485
6.19025	19.7851	.271819
6.1413	20.5461	.222874
6.09646	21.307	.178025
6.05604	22.068	.137612
6.02037	22.829	.101943
5.98972	23.5899	.0712905
5.96432	24.3509	.0458856
5.94435	25.1119	.0259228
5.92999	25.8728	.0115557
5.92132	26.6338	2.89059E-03
5.91843	27.3948	-4.76837E-06

GORE PATTERN FOR A 36 GORE TORUS FOR THE LDEFI

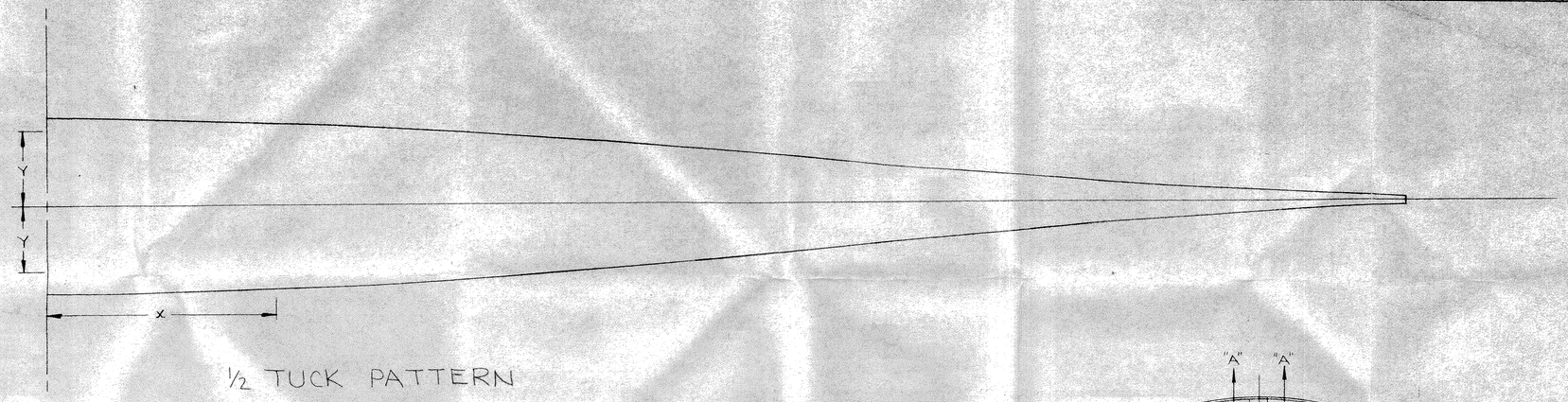
SMALL

1/2 GORE WIDTH	GORE LENGTH X	1/2 TUCK WIDTH Y
5.23571	0	.900007
5.234	.450003	.898295
5.22887	.900006	.893171
5.22037	1.35001	.884674
5.20857	1.80001	.872869
5.19355	2.25001	.857845
5.17542	2.70002	.839718
5.15433	3.15002	.818625
5.13043	3.60002	.794727
5.1039	4.05003	.768204
5.07496	4.50003	.73926
5.04382	4.95003	.708115
5.01071	5.40003	.675005
4.97588	5.85004	.640183
4.93961	6.30004	.603913
4.90217	6.75004	.566473
4.86385	7.20004	.528145
4.82492	7.65005	.489223
4.7857	8.10005	.450003
4.74648	8.55005	.410782
4.70756	9.00006	.371861
4.66923	9.45006	.333533
4.63179	9.90006	.296093
4.59552	10.3501	.259823
4.5607	10.8001	.225001
4.52759	11.2501	.191892
4.49645	11.7001	.160747
4.4675	12.1501	.131803
4.44098	12.6001	.105281
4.41708	13.0501	.0813818
4.39599	13.5001	.0602894
4.37786	13.9501	.0421624
4.36284	14.4001	.0271392
4.35103	14.8501	.0153341
4.34254	15.3001	6.83794E-03
4.33741	15.7501	1.71375E-03
4.3357	16.2001	1.90735E-06

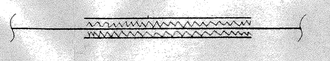
GORE PATTERN FOR A 36 GORE TORUS FOR THE STTA

LARGE

1/2 GORE WIDTH	GORE LENGTH X	1/2 TUCK WIDTH Y
7.44079	0	2.31344
7.43639	1.15672	2.30904
7.42322	2.31344	2.29587
7.40138	3.47016	2.27403
7.37103	4.62688	2.24368
7.33242	5.7836	2.20507
7.28582	6.94032	2.15847
7.2316	8.09704	2.10425
7.17017	9.25376	2.04282
7.102	10.4105	1.97465
7.0276	11.5672	1.90025
6.94754	12.7239	1.82019
6.86243	13.8806	1.73508
6.77292	15.0374	1.64557
6.67969	16.1941	1.55234
6.58345	17.3508	1.4561
6.48493	18.5075	1.35758
6.38488	19.6642	1.25753
6.28407	20.821	1.15672
6.18325	21.9777	1.0559
6.08321	23.1344	.955856
5.98469	24.2911	.857337
5.88845	25.4478	.761097
5.79522	26.6046	.667867
5.70571	27.7613	.578358
5.6206	28.918	.49325
5.54054	30.0747	.413193
5.46614	31.2314	.338793
5.39797	32.3882	.27062
5.33654	33.5449	.209189
5.28232	34.7016	.15497
5.23573	35.8583	.108376
5.19711	37.015	.0697589
5.16677	38.1718	.0394154
5.14492	39.3285	.0175748
5.13175	40.4852	4.40407E-03
5.12735	41.6419	2.86102E-06

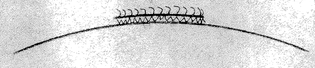


½ TUCK PATTERN

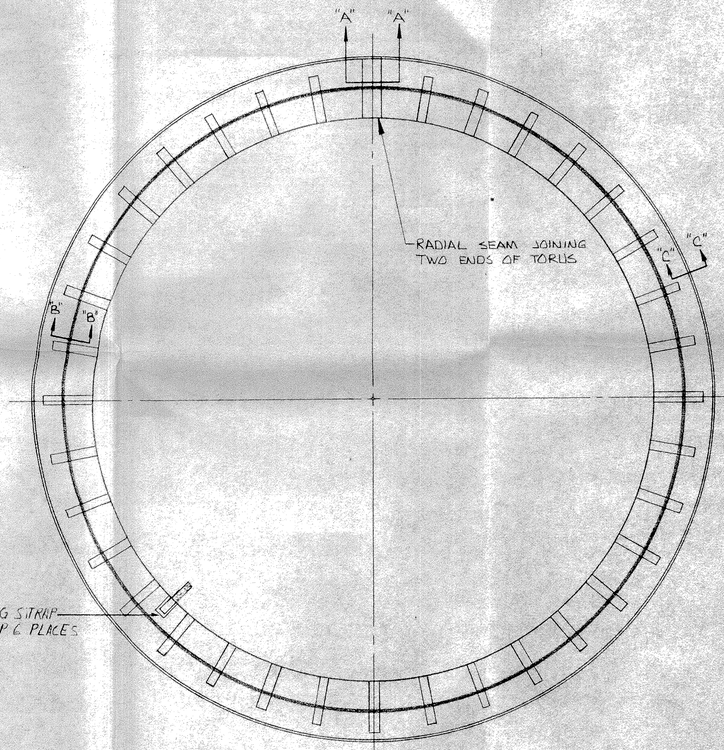


SECTION "A"-"A"
(STEP #8)

SECTION "B"-"B"
(STEP #9)



SECTION "C"-"C"
(STEP #10)



STEP #8: JOIN 2 OPEN ENDS OF TORUS TUBE FORMING CLOSED TORUS.
STEP #9: ADHERE 1 IN. HOOK FASTENER TAPE OVER BUTT SEAM WHICH FORMED TUBE.
STEP #10: ADHERE 1 IN HOOK FASTENER TAPE OVER FASTENER TAPE REFERENCE LINE (STEP #1)

QTY. REQ'D	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.

LIST OF MATERIALS OR PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

DRAWN	LLM	6-28-83
CHECKED		
PROJ. ENG.	MLN	8-1-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

NEXT ASSY | USED ON
APPLICATION
DO NOT SCALE DRAWING
CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

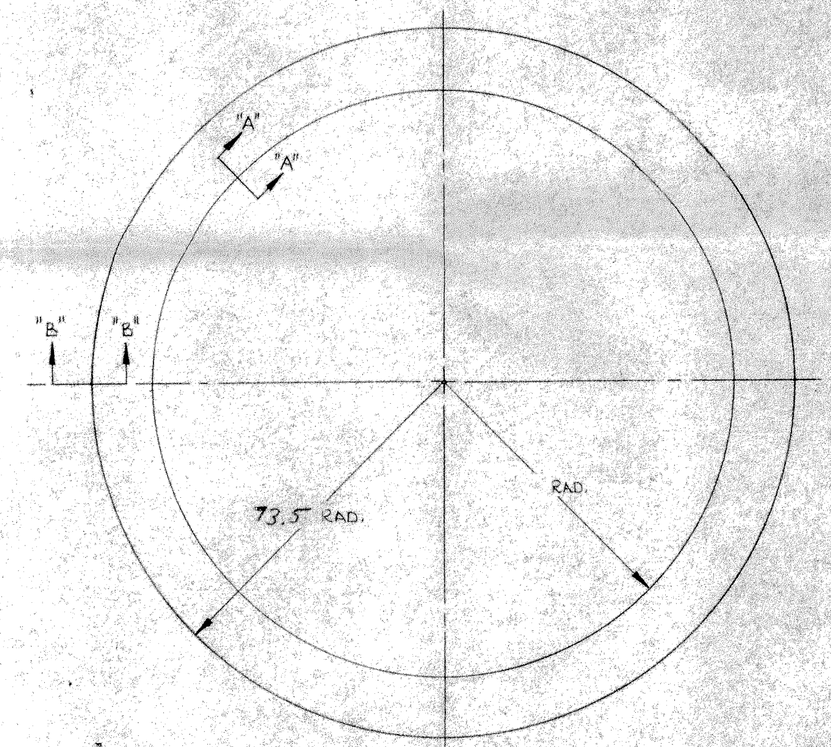
TITLE
STTA TORUS

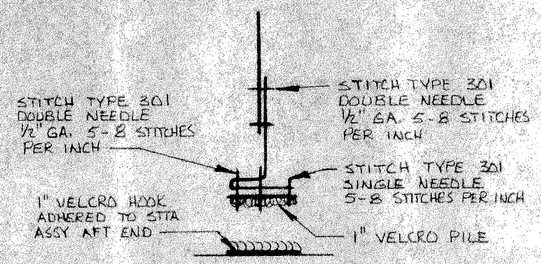
FEB 171984

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	D-51651

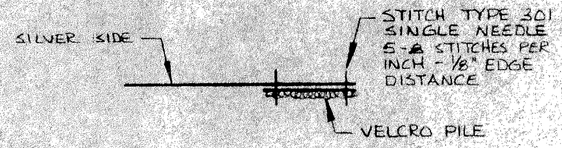
SCALE | WT. | SHEET 3 OF 3

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED





SECTION "A" - "A"



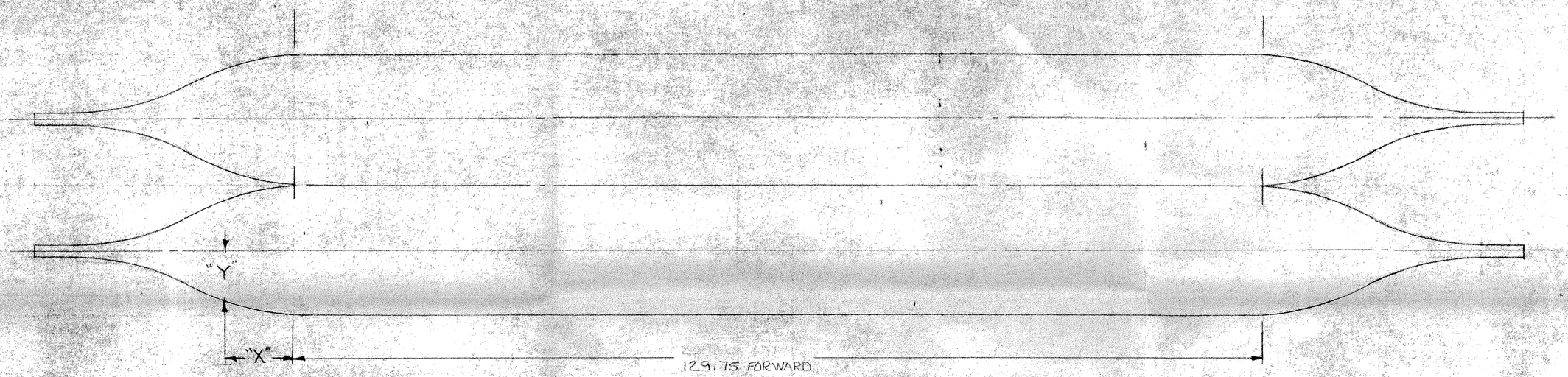
SECTION "B" - "B"

FEB 17 1984

		UNLESS OTHERWISE SPECIFIED	DRAWN	LLM	7-5-83	RAVEN industries, inc. SIOUX FALLS, SOUTH DAKOTA
		DIMENSIONS ARE IN INCHES TWO PLACE DECIMALS ± .03 THREE PLACE DECIMALS ± .010 FRACTIONS ± ANGLES ± 0°-30' BREAK EDGES .005-.015	CHECKED			
			PROJ. ENG.	MLW	8-1-83	TITLE: STTA AFT END MID TORUS SKIRT
			MFG.			
			Q. C.			
		MATERIAL				
			RELEASE FOR PRODUCTION			CODE IDENT NO. 14979 / SIZE C / DRAWING NO. C-51656
			NO.	APPROVED	DATE	
NEXT ASSY	USED ON					
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.			SCALE / WT. / SHEET

STANDARDBLUE, OMAHA 26627

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



INCHES "Y"	"X"
10.472	0
10.4521	2.618
10.3925	5.236
10.2936	7.854
10.1562	10.472
9.98143	13.09
9.77051	15.708
9.52608	18.326
9.24701	20.944
8.93281	23.562
8.60163	26.18
8.23924	28.798
7.85399	31.416
7.44882	34.034
7.0268	36.652
6.59116	39.27
6.14521	41.888
5.69283	44.506
5.23598	47.124
4.77943	49.742
4.32676	52.36
3.8808	54.978
3.44516	57.596
3.02315	60.214
2.61798	62.832
2.23273	65.45
1.87034	68.068
1.53357	70.686
1.22497	73.304
.946902	75.922
.701475	78.54
.490558	81.158
.315757	83.776
.178403	86.394
.079540Z	89.012
.0199212	91.63
0	94.248

NOTES: 1. X AND Y DIMENSIONS ARE NOT ADJUSTED FOR ELONGATION OR CREEP

FEB 17 1984

		UNLESS OTHERWISE SPECIFIED	DRAWN	LLM	7-1-83
		DIMENSIONS ARE IN INCHES	CHECKED		
		TWO PLACE DECIMALS ± .03	PROJ. ENG.	MLM	7-1-
		THREE PLACE DECIMALS ± .010	MFG.		
		FRACTIONS ±	Q. C.		
		ANGLES ± 0°–30′			
		BREAK EDGES .005–.015			
		MATERIAL			
			RELEASE FOR PRODUCTION		
NEXT ASSY	USED ON		NO.	APPROVED	DATE
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.		

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE
STTA GORE PATTERN
FORWARD END

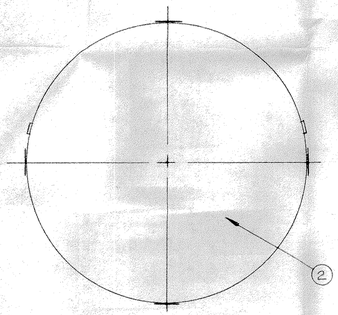
CODE IDENT NO.	SIZE	DRAWING NO.
14979	C	C-51657

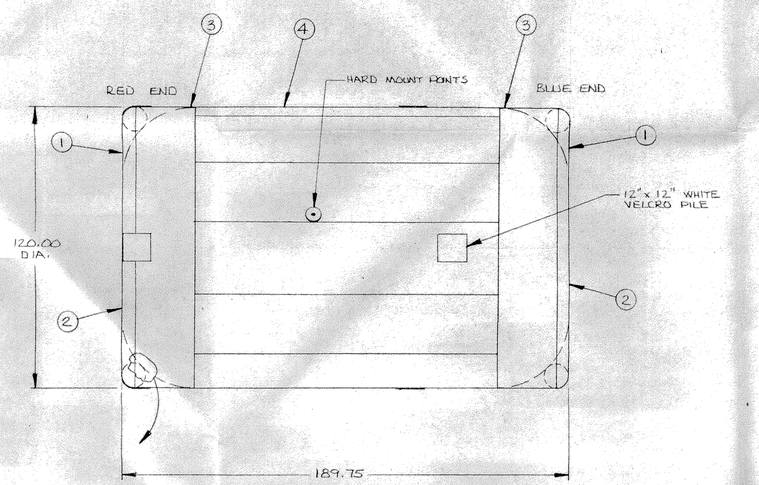
SCALE NONE	WT.	SHEET

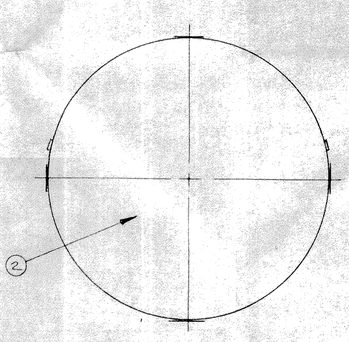
C-51510

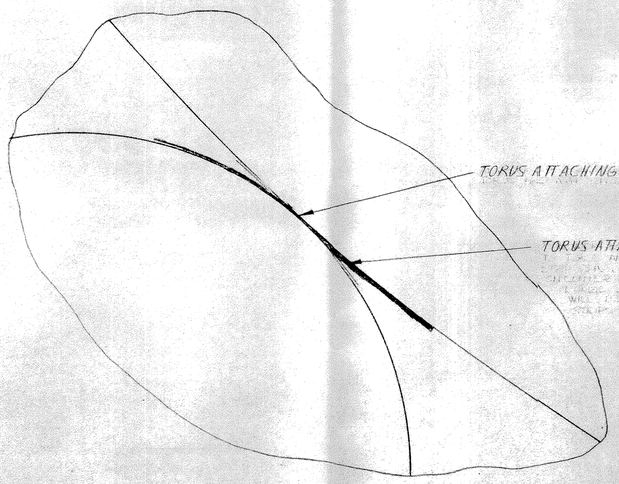
STANDARDBLUE, OMAHA 36627

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED









FEB 171984

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
1	STTA MAIN ENVELOPE		D-51628			4
2	STTA SKIRT		D-51627			3
2	STTA END PANEL		D-51630			2
2	STTA TORUS		D-51635			1

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

DRAWN	LLM	8-15-83
CHECKED		
PROJ. ENG.	MLW	8-16-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

DO NOT SCALE DRAWING
CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE
STTA ASSEMBLY
FORWARD SECTION

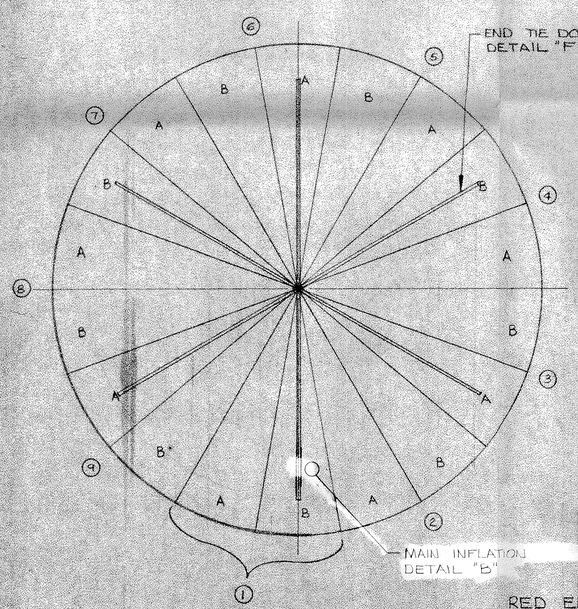
CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	D-51658

SCALE 3/8" = 1'-0" | WT. | SHEET

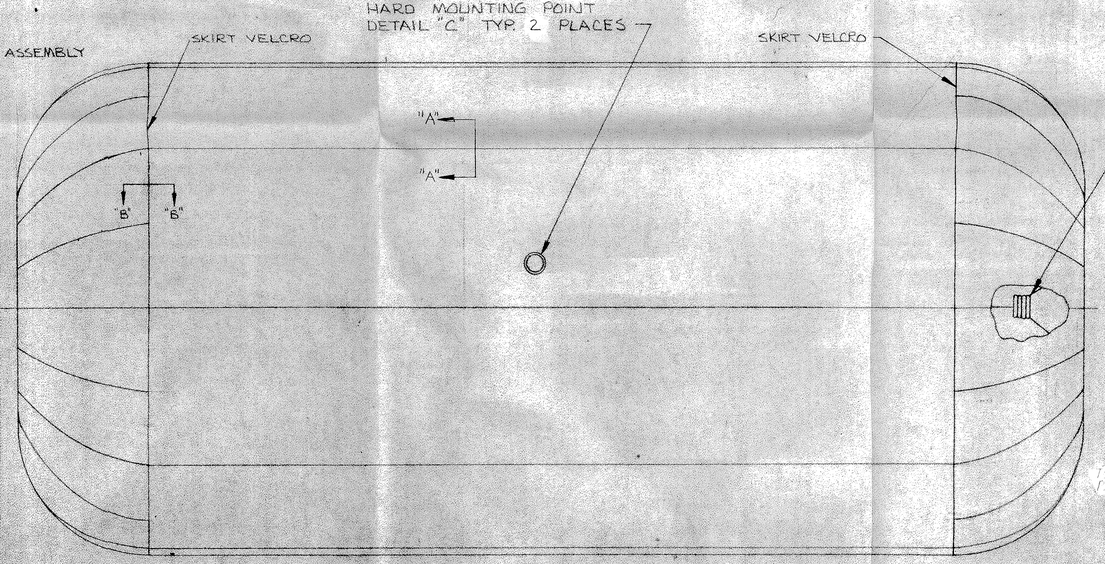
STANDARDBLUE, OMAHA 97101

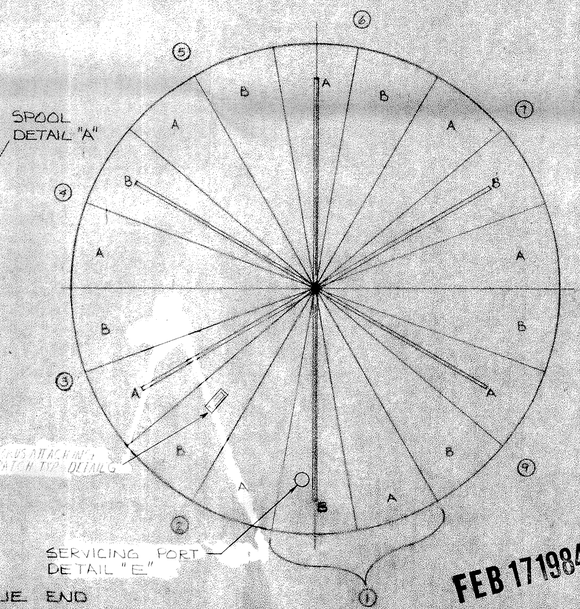
REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

STTA IS CONSTRUCTED OF 9 MAJOR GORES
ENDS OF MAJOR GORES SUBDIVIDE TO FORM
MINOR GORES TO FORM INVERTED ENDS



RED END





BLUE END

FEB 171994

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
	LIST OF MATERIALS OR PA					

NEXT ASSY	USED ON
APPLICAION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

DO NOT SCALE DRAWING

DRAWN	LJM	7-1-69
CHECKED		
PROJ. ENG.	MLW	8-1-93
MFG.		
Q. C.		

RELEASE FOR PRODUCTION		
NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

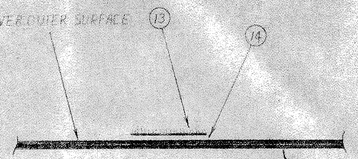
TITLE
STTA MAIN ENVELOPE
FORWARD SECTION

CODE IDENT.	SIZE	DRAWING NO.
14979	D	D-51659

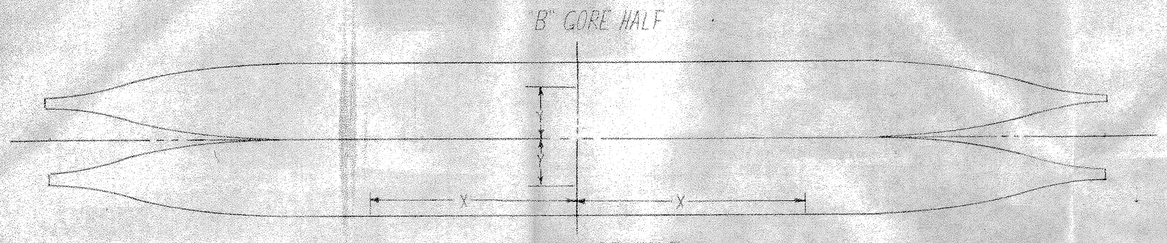
SCALE | WT. | SHEET 1 OF 4

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

SECTION A-A



SECTION B-B



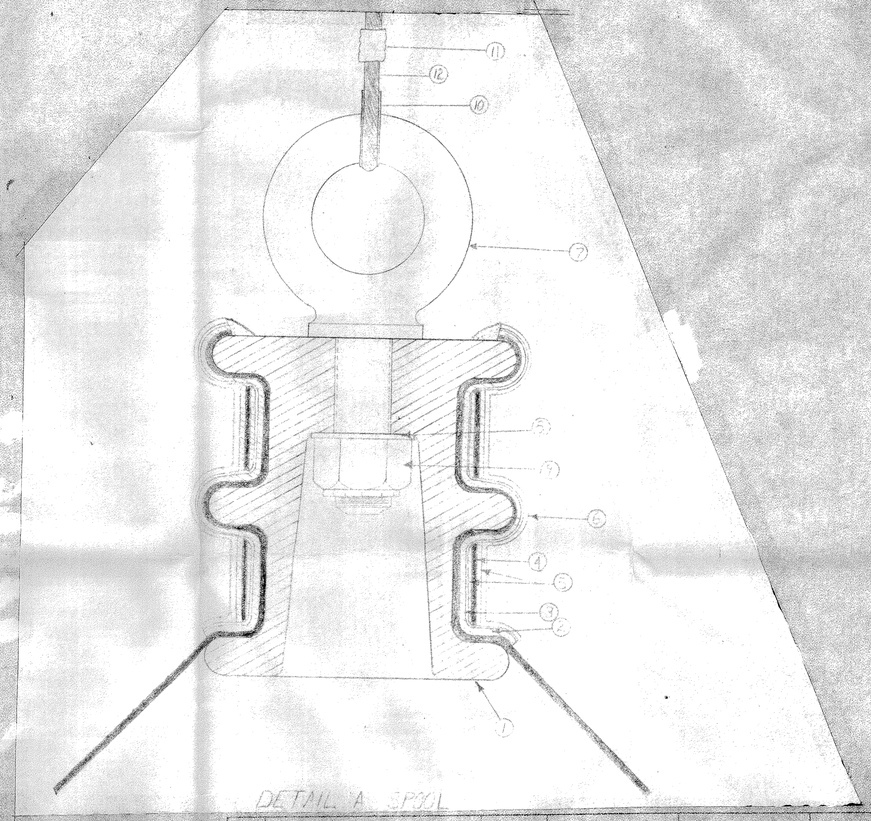
RED END

BLUE END

HARDWARE MOUNTING LOCATIONS

NUMBER	TYPE OF HARDWARE	GORE NUMBER	END	GORE HALF	X	Y	DETAIL	REMARKS
1	HARD MOUNTING RINGS	4	RED	A	12.6	6.88	C	
2	HARD MOUNTING RINGS	8	RED	A	12.6	14.06	C	
3	MAIN INFLATION PORT	1	RED	B	119.4	6.0	B	
4	STEM VALVE	1	BLUE	B	119.4	6.0	E	

NOTES: 1. 2" SEAL STRIP MADE FROM MAIN ENVELOPE MATL WITH WHITE TO WHITE SURFACES BONDED W/HEAT



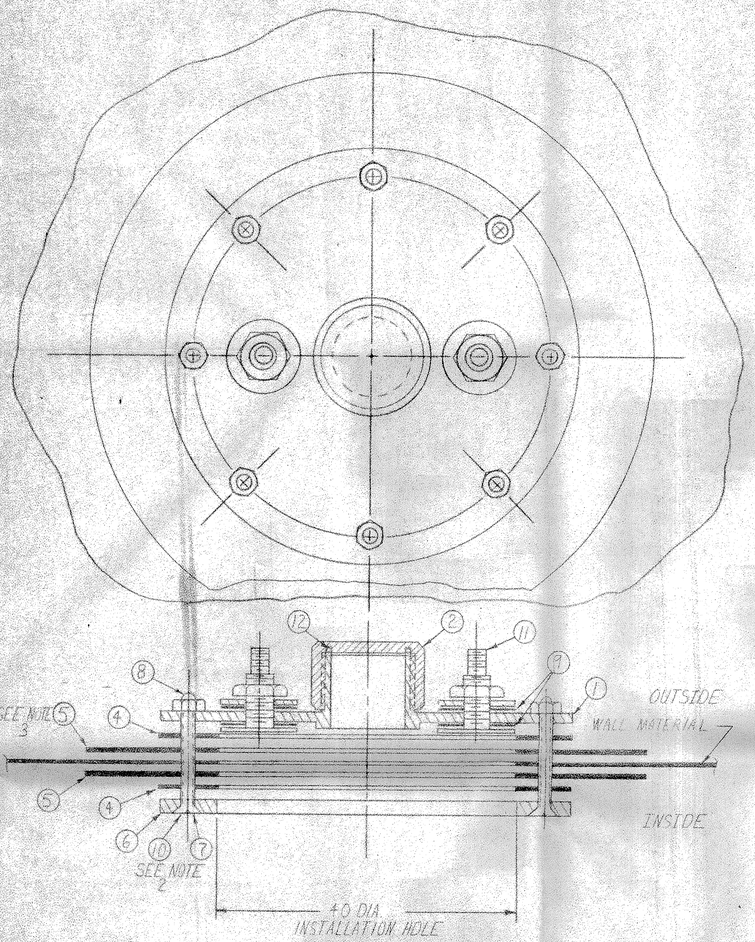
DETAIL A SPOOL

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
AR	CLOTH			MIL-T-[illegible] ITEM		14
AS	FASTEN-R TAPE 1" HOOK		B-51400-13	5210#		13
1	WIRE ROPE 1/4"					12
1	WIRE ROPE SLEEVE 1/4					11
1	WIRE ROPE THIMBLE 1/4					10
1	FLAT WASHER 1/4		B-51417-4		AN 960-416	9
1	NUT PLATE 1/4		B-51415-4		4-40 NAS	8
1	SHOULDER EYEBOLT		B-51019-11	5210#	2.375 DIA x 2	7
AR	TAPE 1" WIDE		B-51054-13		5210 SM	6
AR	TAPE 1" WIDE		B-51054-13		5210 SM	5
AR	STEEL BANDING 3/4"		B-51070-14		COMMERCIAL	4
AR	TAPE 1" WIDE		B-51054-13		#420 SM	3
AR	PLASTIC WRAPPER				POLYETHYLENE ASMC	2
1	SPOOL		B-51400-7			1

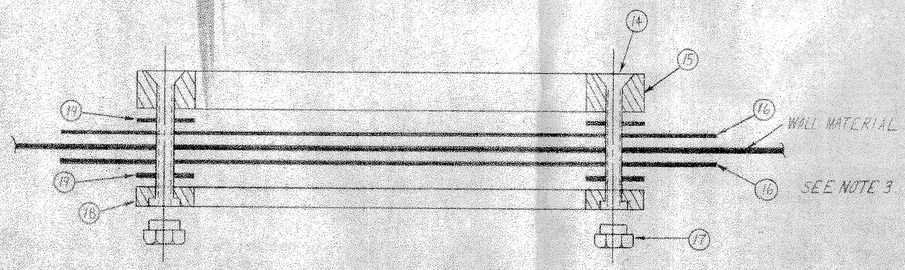
LIST OF MATERIALS OR PARTS LIST

UNLESS OTHERWISE SPECIFIED	DRAWN	LLM 6-1-83	RAVEN industries, inc. SIOUX FALLS, SOUTH DAKOTA
DIMENSIONS ARE IN INCHES TWO PLACE DECIMALS ± .03 THREE PLACE DECIMALS ± .010 FRACTIONS ± ANGLES ± 0°–30' BREAK EDGES .005–.015	CHECKED		TITLE: STTA MAIN ENVELOPE FORWARD SECTION
	PROJ. ENG.	A WEST 6/28/83	FEB 17 1984
MATERIAL	MFG.		
	Q. C.		
	RELEASE FOR PRODUCTION NO. / APPROVED / DATE		CODE IDENT NO. 14979 · SIZE D · DRAWING NO. D-51659
NEXT ASSY / USED ON			SCALE · WT. · SHEET 2 OF 4
APPLICATION	DO NOT SCALE DRAWING	CONTR NO.	

STANDARD BLUE, EMULSION 27101



DETAIL "B" MAIN INFLATION PORT



DETAIL "C" HARD MOUNTING POINT

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

NOTES:

1. DIFFUSER, ITEM #3, IS INSERTED IN OPENING AFTER CAP IS REMOVED. FILL HOSE IS THEN SCREWED ON HOLDING DIFFUSER IN PLACE.
2. EPOXY, ITEM #10, TO SECURE SCREW HEAD FROM TURNING AND FALLING OUT.
3. ADHESIVE, ITEM #13, TO BE USED TO BIND DOUBLER TO WALL.

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
AR	GASKET		C-51624			19
1	INNER HARD MOUNT RING		C-51625			18
6	SPLINE NUT		51016-06			17
2	DOUBLER		C-51629			16
1	OUTER HARD MOUNT RING		C-51625			15
6	FLAT HEAD SCREWS NAS 80-6		1/4-20			14
AR	ADHESIVE		7170			13
	O-RING		2-022		BOSTICK PARKER	12
2	TIRE VALVE					11
AR	EPOXY		EC 7216 B/A		3M	10
2	GASKET TIRE VALVE		B-14495			9
15	NUT CAP #10-32		22NK10-02			8
6	FLAT HEAD SCREW #10-32×3/4			MIL-S-375-374		7
1	STUD RING		B-14494			6
2	DOUBLER		B-14493			5
2	GASKET		B-14492			4
1	DIFFUSER		B-14491			3
1	CAP		B-14490			2
1	TOP PLATE WELDMENT		B-14489			1

LIST OF MATERIALS OR PARTS LIST

FEB 17 1984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRIACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

DO NOT SCALE DRAWING

DRAWN	LLM	7-1-83
CHECKED		
PROJ. ENG.	MWEST	7/27/83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

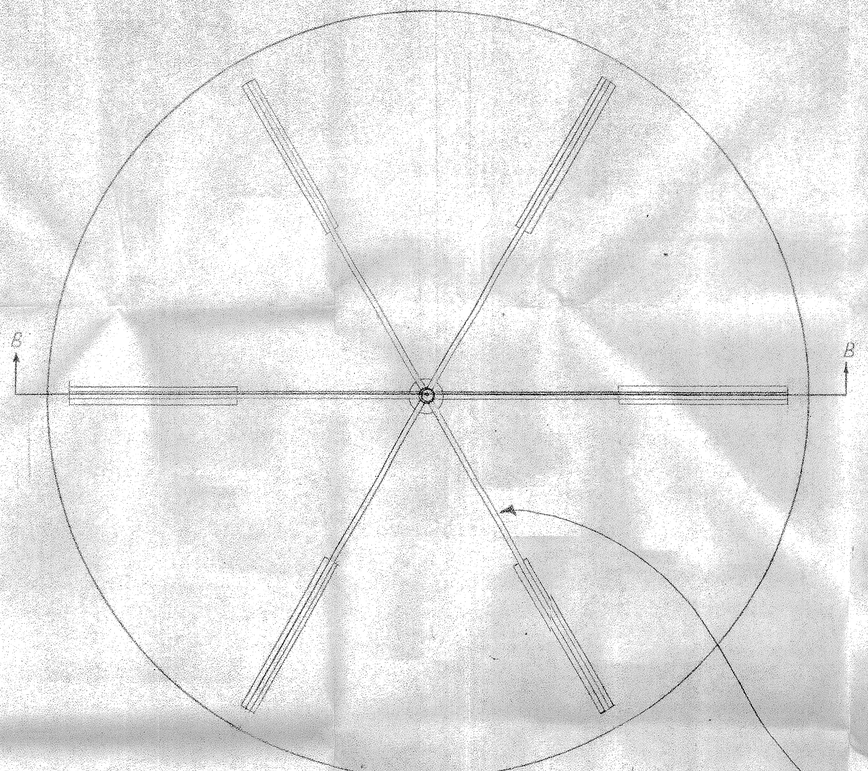
TITLE
STTA MAIN ENVELOPE
FORWARD SECTION

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	D-51659

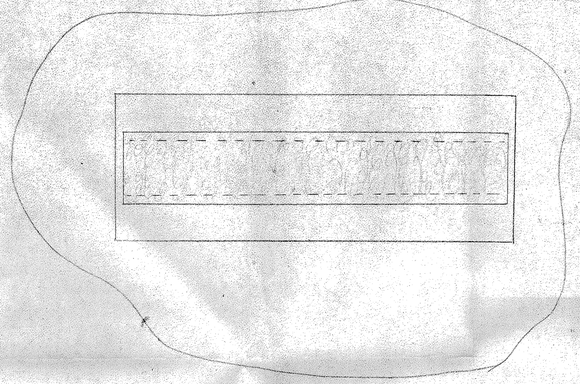
SCALE | WT. | SHEET 3 OF 4

STANDARDLINE, OMAHA 67105

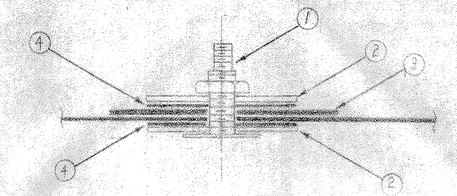
REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



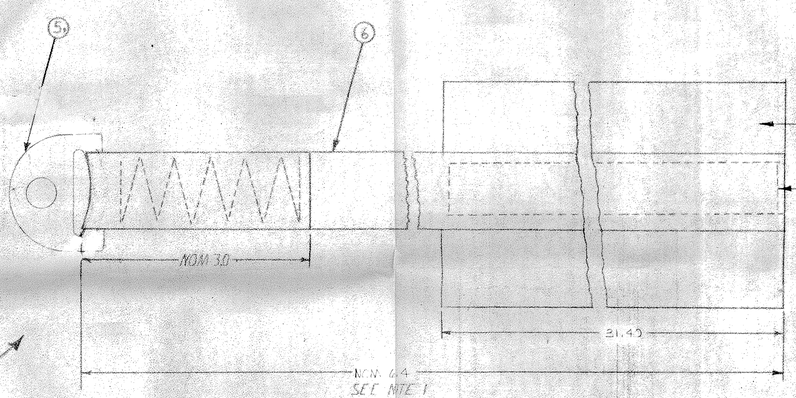
DETAIL "F"
END TIE DOWN ASSEMBLY

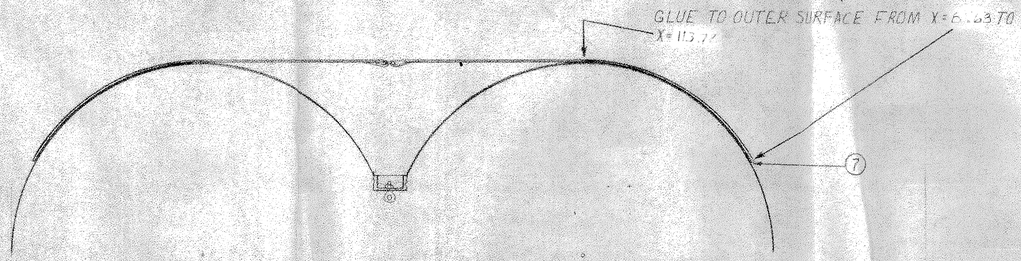


DETAIL "G" TORUS ATTACHING PATCH



DETAIL "E" STEM VALVE MOUNT





SECTION A-A

NOTES: 1. TAPE SHOULD BE GLUED TO RESPECTIVE GORES DURING ASSEMBLY AND FITTED TO THE RING DURING AIR INFLATION. A MINIMUM OF 1 INCH SLACK SHOULD BE ALLOWED DURING FITTING BETWEEN END OF GLUEING AND RING.
2. TAPES SHOULD BE GLUED TO THE MIDDLE OF THE FOLLOWING GORES AT EACH END: 1E, 2A, 4E, 6A, 7E, 9A

FEB 171984

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
AR	ADHESIVE					7
6	TIE DOWN TAPES		MIL-T-5038 TY I			6
6	TIE DOWN RING					5
2	GASKETS		B-51622			4
1	DOUBLER		B-51623			3
2	LARGE DIA WASHER		B-51626			2
1	TIRE VALVE					1

LIST OF MATERIALS OR PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATEERIAL

DO NOT SCALE DRAWING

DRAWN	L.L.N.	7-1-83
CHECKED		
PROJ. ENG.	R. [illegible]	7-28-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE
STTA MAIN ENVELOPE
FORWARD SECTION

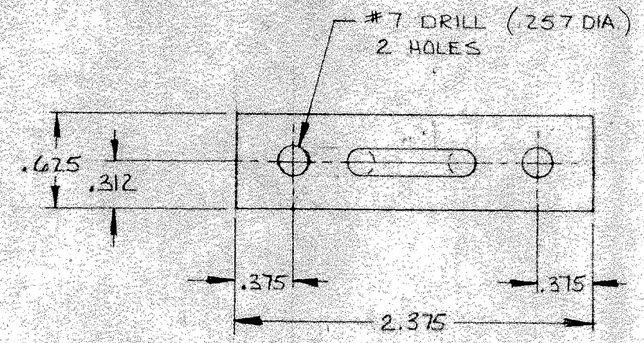
CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	51659

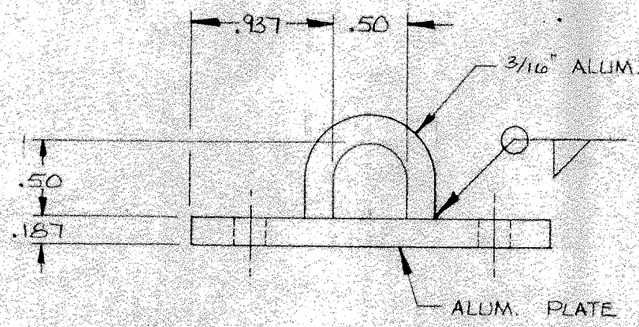
SCALE

SHEET 4 OF 4

STANDARD BLUE, OMAHA 87101

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED





FEB 171984

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°–30'
BREAK EDGES .005–.015

MATERIAL
AS NOTED

DO NOT SCALE DRAWING

DRAWN	LLM	7-5-83
CHECKED		
PROJ. ENG.	MLW	8-1-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION		
NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

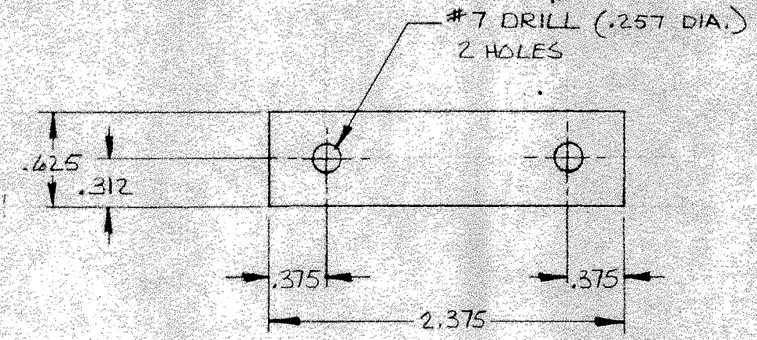
TITLE
CONNECTOR PLATE

CODE IDENT NO.	SIZE	DRAWING NO.
14979	B	B-51663

SCALE 1/1 | WT. | SHEET

STANDARDBLUE, OMAHA 18429

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

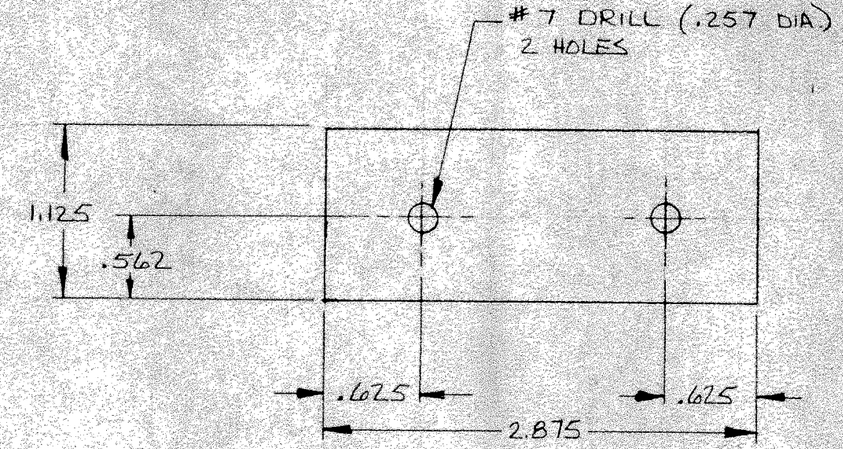


FEB 17 1984

		UNLESS OTHERWISE SPECIFIED	DRAWN	LUM 7-5-83	RAVEN industries, inc. SIOUX FALLS, SOUTH DAKOTA
		DIMENSIONS ARE IN INCHES TWO PLACE DECIMALS ± .03 THREE PLACE DECIMALS ± .010 FRACTIONS ± ANGLES ± 0°–30' BREAK EDGES .005–.015	CHECKED		TITLE: INNER PLATE
			PROJ. ENG.	MLW 8-1-83	
			MFG.		
			Q. C.		
		MATERIAL: 1/8" ALUM. PLATE			CODE IDENT NO. 14979 / SIZE B / DRAWING NO. B-51664
NEXT ASSY	USED ON		RELEASE FOR PRODUCTION: NO. / APPROVED / DATE		
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.		SCALE 1/1 / WT. / SHEET

STANDARDBLUE, OMAHA 15429

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

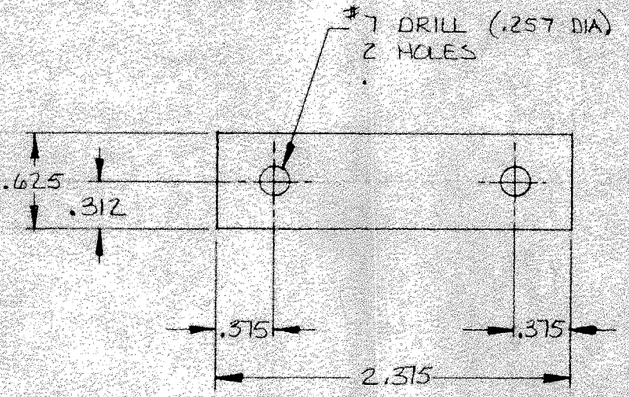


FEB 17 1984

		UNLESS OTHERWISE SPECIFIED	DRAWN	LLM	7-5-83	RAVEN industries, inc. SIOUX FALLS, SOUTH DAKOTA	
		DIMENSIONS ARE IN INCHES	CHECKED				
		TWO PLACE DECIMALS ± .03	PROJ. ENG.	MLW	8-1-83	TITLE	
		THREE PLACE DECIMALS ± .010	MFG.			DOUBLER	
		FRACTIONS ±	Q. C.				
		ANGLES ± 0°-30'					
		BREAK EDGES .005-.015					
		MATERIAL				CODE IDENT NO.	SIZE / DRAWING NO.
		RBADS 1075	RELEASE FOR PRODUCTION			14979	B / B-51665
NEXT ASSY	USED ON		NO.	APPROVED	DATE		
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.			SCALE 1/1	WT. / SHEET

STANDARDBLUE, OMAHA 18429

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED

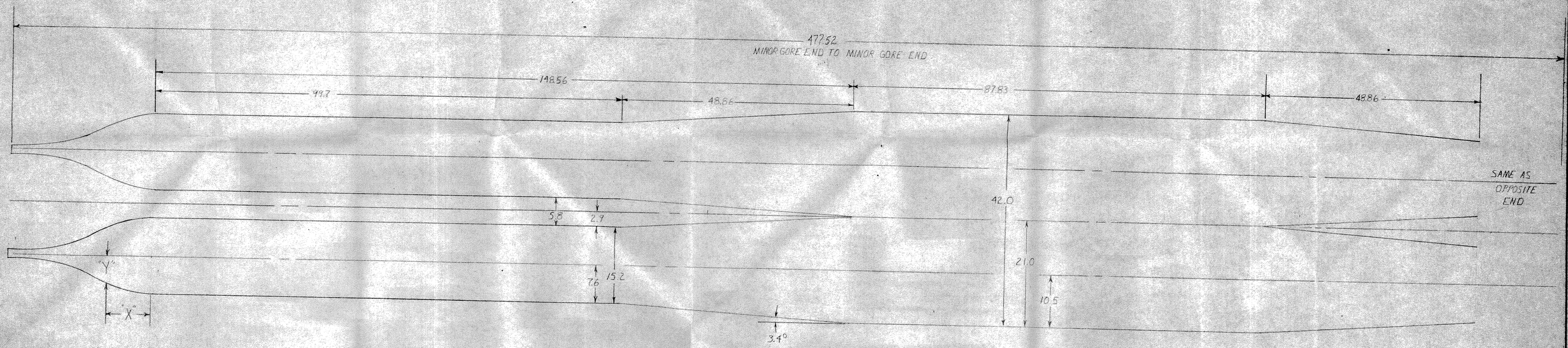


FEB 17 1984

		UNLESS OTHERWISE SPECIFIED	DRAWN	LUM	7-5-83	RAVEN industries, inc. SIOUX FALLS, SOUTH DAKOTA
		DIMENSIONS ARE IN INCHES TWO PLACE DECIMALS ± .03 THREE PLACE DECIMALS ± .010 FRACTIONS ± ANGLES ± 0°–30' BREAK EDGES .005–.015	CHECKED			
			PROJ. ENG.	M.W	8-1-83	TITLE: GASKET
		MATERIAL .062 NEOPRENE 40 DUROMETER	MFG.			
			Q. C.			CODE IDENT NO. 14979 / SIZE B / DRAWING NO. B-51666
NEXT ASSY	USED ON		RELEASE FOR PRODUCTION NO. / APPROVED / DATE			
APPLICATION		DO NOT SCALE DRAWING	CONTR NO.			SCALE 1/1 / WT. / SHEET

STANDARDBLUE, OMAHA 18439

REVISIONS			
LTR.	DESCRIPTION	DATE	APPROVED



GORE PATTERN FOR A 24 GORE END TORUS FOR THE STTA

1/2 GORE WIDTH-'Y'	GORE LENGTH-'X'
7.60005	0
7.58559	2.67035
7.54232	5.3407
7.47057	8.01105
7.37088	10.6814
7.24402	13.3518
7.09094	16.0221
6.91282	18.6925
6.71101	21.3628
6.48705	24.0332
6.24263	26.7035
5.97963	29.3739
5.70003	32.0442
5.40598	34.7145
5.0997	37.3849
4.78354	40.0553
4.45988	42.7256
4.13121	45.396
3.80001	48.0663
3.46882	50.7367
3.14014	53.407
2.81649	56.0774
2.50033	58.7477
2.19405	61.4181
1.9	64.0884
1.6204	66.7588
1.3574	69.4291
1.11299	72.0995
.889024	74.7698
.687214	77.4402
.509095	80.1105
.356023	82.7809
.229161	85.4512
.129476	88.1216
.0577264	90.792
.014458	93.4623
0	96.1327

FEB 171984

QTY. REQ'D.	NOMENCLATURE OR DESCRIPTION	CODE IDENT	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTE	ITEM NO.
LIST OF MATERIALS OR PARTS LIST						

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TWO PLACE DECIMALS ± .03
THREE PLACE DECIMALS ± .010
FRACTIONS ±
ANGLES ± 0°-30'
BREAK EDGES .005-.015
MATERIAL

DO NOT SCALE DRAWING

DRAWN	M WEST	30-11-83
CHECKED		
PROJ. ENG.	M WEST	30-11-83
MFG.		
Q. C.		

RELEASE FOR PRODUCTION

NO.	APPROVED	DATE

CONTR NO.

RAVEN industries, inc.
SIOUX FALLS, SOUTH DAKOTA

TITLE
STTA AFT END GORE PATTERN

CODE IDENT NO.	SIZE	DRAWING NO.
14979	D	52021

SCALE	WT.	SHEET

STANDARDBLUE, OMAHA 68101